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# CHICAGO
# Medical Examiner,

EDITED BY

N. S. DAVIS, M.D.

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1870.

# CHICAGO MEDICAL COLLEGE.

The regular Annual Lecture Term in this Institution will commence on the first Monday in October, and continue until the second Tuesday in March following. Clinical Lectures *daily* throughout the term.

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## FEES.

| | |
|---|---|
| For the Winter Term, admitting to all the Lectures in the College, | $50 00 |
| Graduation Fee, | 20 00 |
| Matriculation Fee, | 5,00 |
| Dissecting Ticket, | 5,00 |
| Hospital Ticket, | 6,00 |

The Summer Reading and Clinical Term commences on the first Monday in April, and continues until the first Monday in July; and is free to all matriculated Students of the College. Boarding, $3.50 to $4.50 per week. For further information, address

**E. ANDREWS, M.D.,** *Sec'y of the Faculty.*

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THE

# CHICAGO MEDICAL EXAMINER.

N. S. DAVIS, M.D., EDITOR.

VOL. XI. NOVEMBER, 1870. NO. 11.

## Original Contributions.

ARTICLE XXXIV.

## A LECTURE, INTRODUCTORY TO THE GENERAL COURSE IN THE CHICAGO MEDICAL COLLEGE, FOR THE SESSION OF 1870–71.

BY H. A. JOHNSON, M.D.,
Professor of Diseases of the Respiratory and Circulatory Organs.

What is meant by the study of medicine? How should it be pursued? What helps do medical colleges generally afford? What are the peculiar aids afforded by this institution? Such, gentlemen, are the questions that must have engaged your thoughts heretofore, and that, almost of necessity, present themselves on this occasion.

### WHAT IS THE STUDY OF MEDICINE?

In answer to the first question, it may be stated, in brief, that medicine, in the more general sense of the term, is made up of pure science, and applied science, or art. It is broad in its relations, and, for its apprehension, an important prerequisite is a good, liberal, scientific, and, if possible, literary education. The success or failure of men in the profession depends much more upon this general preparation for special work than is usually supposed. By the study of medicine, we mean, first, the study of those sciences that have to do with the human

organism; the structure, chemical composition, and uses, of its parts, together with the forces, both physical and those, which, for want of a better term, we call vital, that seem to belong to its forms; or, in the words of a modern formula, the modes of motion therein observed. To these subjective studies must be added a careful investigation of all those influences, or agents, that, acting from without, impress, for good or evil, the mechanism of life. This first department of study embraces anatomy, physiology, chemistry—inorganic and organic, general pathology, etiology, hygiene, the general principles of cure, and the natural history and properties of drugs. The second department of study consists in the application of the facts embraced in this first group. In other words, it is applied science. It includes the study of special diseases, with reference to their cure, or relief, by the control or modification of the modes of motion within the body, or of influences acting upon it from without. It is made up of what are usually termed the practical branches, or the principles and practice of medicine, surgery, and obstetrics—the principles usually taught in didactic lectures; the practice best taught at the bedside of the patient.

HOW SHOULD THIS STUDY BE PURSUED?

From this brief statement of the subjects of study, it must be evident to you, gentlemen, that, in the order of time, the facts must be learned first; afterwards, their application. The more distinctly scientific studies must precede those which are mixed in their character (being both science and art), and which often present problems more difficult than any which are found in the domain of purely physical science. That they so frequently remain unsolved is, because our knowledge of the precedent facts is so limited.

The best method, or rather order, of study suggested by this examination of the subjects to be investigated, is a matter, gentlemen, of the utmost importance. The student of Greek would hardly attempt to write Greek poetry without having first studied Greek roots, and thoroughly mastered the grammar of the language. One may *guess*, perhaps, the solution of a problem in applied mathematics, but he will not be likely to know

much about it, unless he has first, by patient study, possessed himself of the fundamental principles of the science. The architect may have some idea of beauty of proportions and fitness of forms, but cannot, safely, be trusted to design and superintend the erection, or repairs, of an important structure, unless he has first learned the weight and strength of his material, the direction and quantity of resultant forces, with many other facts in physical science that are directly concerned in his art-work. The order of study, in these supposed cases, is progressive, each subject occupying, in the order of time, the position, which, in the order of science, it logically sustains to every other subject of investigation. There is no good reason why medical studies should not be pursued in the same way; in fact, such is the case now everywhere, except in our own country.

WHAT AID DO THE COLLEGES GENERALLY AFFORD?

The colleges organized anterior to the war of independence were, for the most part, under the control of men who had been thoroughly educated in the schools of Europe. The preliminary and professional attainments required were of a high order, and the degree of doctor in medicine conferred upon only the very few who had afforded the most satisfactory evidences of proficiency. These schools were intended to *educate* the pupil—to discipline his faculties, as well as to enrich his memory; to develope his powers of reasoning, and to prepare him to successfully grapple with the problems of practical therapeutics.

The number of pupils, however, in attendance, was limited. The larger majority of physicians were unable, or unwilling, to avail themselves of the advantages offered by these institutions located in New York and Philadelphia.

In most instances, the education of the pupil was received in the office of the preceptor, who directed the subjects and order of study, and, after the acquisition of a limited knowledge of the elementary branches, permitted him to see cases, and, finally, to prescribe independently, or, in other words, admitted him to practice. This education was, necessarily, sadly deficient, for the want of the means of illustration, and, in too many instances, from the incompetence or indolence of the instructor.

At the end of three or four years, however, the student had obtained, at least, a superficial knowledge of most of the subjects at that time embraced in the curricula of the medical schools of the Old World. The first medical schools established in this country, subsequent to the war of independence, seem to have had quite another purpose. They were intended simply to supply the deficiencies necessarily connected with private teaching. Their germs, so to speak, consisted of lectures on anatomy, to which were subsequently added brief courses on other departments of study, until the college was finally developed. They were intended quite as much as, or, perhaps, more for the practitioner than for the student. The courses were short, usually only thirteen weeks, and the whole field of medicine, surgery, and obstetrics, was passed rapidly in review, rather than carefully considered and taught in detail. The *studies* of the pupil were still supposed to be performed in the office of the preceptor, and the college resorted to for the purpose of refreshing the memory.

It is true, students were received at the very commencement of their period of study, but such usually went out after one course of lectures, and commenced practice, occasionally returning, a few years later, to listen to a repetition of the same course, and receive the degree. The gray-haired veteran, who knew almost nothing of the science of medicine, and the beardless boy, who knew absolutely nothing of the practice, sat side by side, and listened—the one laboriously endeavoring to correct his previous mistakes by placing a foundation beneath his shabby building, and the other, with still more embarrassment, if possible, striving to erect, simultaneously, both foundation and superstructure. During this present century, great changes have been made in our material, intellectual, and social condition. Higher attainments are demanded in all the professions, but especially in that of medicine. Contributions have been brought to it from every department of science. It has been continuously enriched by new truths. By a judicious division of labor, men peculiarly adapted to special studies and practice, have improved its methods and corrected its fallacies. The

cords of its tent have been lengthened, and its stakes strengthened; but, with few exceptions, the colleges are to-day what they were in the infancy of the Republic. Amid all these changes in other departments of education, they alone seem to say *non possumus*. It is true, some of them have extended the terms of lectures; a very few, only, have increased the number of professorships, and have added to their means of illustration, but the system is still based upon the hypothesis—at the present day, only an hypothesis, that the college-lectures are simply a review of what has already been made the subjects of study in the office, or that the pupil is getting a hasty and imperfect preparation for a period of practice, after which he will return and refresh his memory.

It is possible, that in the last quarter of the eighteenth century, when but few could spend the time or means necessary to a thorough preparation, but when many could devote a few weeks to a hasty review, this method of college instruction might have been admissible; but, in the last half of the nineteenth century, when physicians, receiving pupils into their office, assume little responsibility for their studies, seldom directing their reading, or, in fact, doing anything more than to furnish a few antiquated text-books, and, perhaps, a dilapidated skeleton, while the student, if not very conscientious, amuses himself by reading what taxes the least his mental digestion, whether it be "Gray's Anatomy of the Human Body," or "Burton's Anatomy of Melancholy,"—pathological anatomy, or pathological psychology—always looking forward to the college as his educator, and considering the office as a cheap and convenient, if not agreeable, sojourn for the required three years; in this age, and in this country, where we especially boast of our improved methods of education—where our public schools are graded—where, in our literary and scientific institutions of a higher order, the pupil advances step by step—where, in our professional schools, legal and theological, there is method in the arrangement of studies;—under all these circumstances, with all this new condition of things around us, this inertia of the medical schools—their persistance in the at-

tempt to teach the same truths to those commencing, and those completing, their education; to the tyro just learning to pronounce his anatomical alphabet, and to the applicant for the doctorate, is worse than an anomaly—is worse than an absurdity even; inasmuch as it encourages a contentment with superficial attainments, thereby diminishing the proficiency of the profession, it is a crime against humanity.

These defects in our methods of education have been recognized by the profession, and, for the last thirty years, medical societies and prominent medical men have protested against them. The American Medical Association has repeatedly called for reforms, and the faculties of the colleges have almost unanimously admitted the justness of the complaints and the propriety of some change in the curriculum of study. There is almost no one to defend the old order of things, and yet it continues. Why it continues is no mystery to medical teachers. The principal reason is, undoubtedly, the competition between the different medical schools. It is said that students will attend such colleges as make their admission to the profession easy—as require the least work and the shortest time; and, for this reason, no one institution had, up to 1859, dared to establish a progressive course of study. In illustration of the general feeling on this subject, I take the liberty of citing a portion of the history of one of the institutions of our own city. In the year 1857, the faculty, by, if I remember rightly, a unanimous vote of all present, (one member only being absent), decided to adopt a curriculum of study, extending through two years, dividing the subjects into two departments, to be called junior and senior, and requiring students attending their first course of lectures to enter the junior department, made up of the elementary branches, and those attending their second course of lectures to enter the senior department, composed of the practical branches. The adoption of this plan by a formal vote of the Faculty, after mature deliberation, was, in itself, a recognition of the imperfections and inconsistencies of a system, that whatever might have been its utility at an earlier period in our history, had become effete. This wise measure, however, was

never put into operation. The President of the College admitted the propriety of the change, believed that it would make better physicians, but expressed a fear that students would be repelled by the increased labor imposed and higher attainments exacted. In deference to this apprehension, without any reconsideration of the vote, the old method was continued, and no improvement has been made, I believe, up to the present time. Other medical teachers privately expressed themselves as heartily tired of the prevailing system, if indeed it be a system, but were restrained from attempting reforms by the same considerations—a fear that their pupils would seek for their diplomas in competing schools, where the labor was less, and the standard consequently, lower. In the conventions of medical colleges that have been held in connection with the American Medical Association, there has not been a single reason urged for the existing order of things. The only apology offered in its defence is, that it has made good physicians. The fact is, the schools do not make physicians, but they help individuals, more or less, to qualify themselves for the office, and the better the help, the easier the qualification is obtained. Men have become good mechanics without masters, able lawyers without instructors, eloquent divines without professors, and skilful physicians without preceptors, but these examples by no means constitute a reason why the best aids to excellence in these several departments of effort should be ignored or neglected. Notwithstanding a very general admission of failures by those interested in teaching, no action has been had, because each school feared that its neighbor would not come up to the standard. The members of the profession at large, represented in the National Association, have, from year to year, adopted reports and resolutions, all calling loudly for a change, but they have been unable to convince the colleges that medical students were equally desirous for extended courses and classified studies. We have thus briefly alluded to the history of medical schools, and to the reasons for the anomaly they present, in order to answer the second query. It must be evident to you that the colleges generally can help you by furnishing, to a limited ex-

tent, the opportunity for study, and the means of illustration, leaving the question of the arrangement of subjects entirely to yourselves. So far as physical digestion is concerned, it is not, perhaps, a matter of much consequence, whether fruits and desserts are taken before or after beefsteak and potatoes; but, so far as mental assimilation is concerned, the order in which the subjects are presented becomes a matter of the greatest importance. The accumulation, in a desultory manner, of unclassified facts, is almost as useless as a miscellaneous unclassified collection of objects in natural history. The method generally pursued is faulty, not only in this want of order, but, also, in the effort to accomplish the impossible feat of teaching the whole of the science and the art of medicine, surgery, and obstetrics, in the short period appropriated to a single lecture-term. It may be said, in answer to this, that all the colleges require three years of study and two courses of lectures. This is true, but the second course of lectures is only a repetition of the first, and the whole field is usually looked at, a kind of bird's-eye view, in from four to five months, the student gaining some knowledge of many things, but an accurate knowledge of hardly any one thing.

WHAT ARE THE PECULIAR AIDS AFFORDED BY THIS INSTITUTION?

Convinced that something better was possible, and that at least a few medical students were ready to work for a higher standard of attainments, the founders of the Chicago Medical College unanimously determined to make an earnest effort for reform.

In the Spring of 1859, it became evident that a new medical college was about to be organized in this City, and it was possible for a few individuals to control the movement, and give direction and character to the new institution.

My own connection with the Rush Medical College had recently terminated; Professors Andrews and Hollister, who had also been connected with that institution, had previously resigned. Our experience as teachers, as well as our remembrance of our own student life, had led us to the firm convic-

tion, that these radical evils of the schools were not an absolute necessity, and we believed that the public and the profession would second our efforts for something better.

The peculiar features and relations of the Chicago Medical College must be my apology for detaining you a few moments, while I present the most important points in its history. In doing so, I shall be able to answer satisfactorily, I trust, the last of the four questions that we have proposed to ourselves this evening.

The first entry in the record book of the Faculty is as follows: "At a meeting held March 12, 1859, at the office of Drs. Rutter and Isham, the following named gentleman were present: David Rutter, M.D., Hosmer A. Johnson, M.D., Edmund Andrews, M.D., and Ralph N. Isham, M.D. It was announced in a few words by Dr. Johnson, that the object of the meeting was to organize a Medical Faculty of the Lind University, on the basis of a proposition made by the Trustees of Lind University, and submitted to the above-named gentlemen for their consideration." After a temporary organization, the proposition was considered, discussed, and finally accepted. The provisions of the agreement between the above-named and the Trustees of the University, were substantiaally as follows:

1st. That the University should furnish, for the temporary use of the Department of Medicine, rooms free of rent for three years.

2d. That at the end of three years, the University should provide a permanent building, or rooms suitable for the Department.

3d. The Faculty of Medicine to nominate, the Trustees to appoint, all professors in the Department.

4th. The Medical Professors to give the proceeds of their lectures for three years, for the purpose of procuring the means of illustration.

5th. The Faculty to meet all expenses, except that of rooms.

6th. The degrees to be conferred by the University, upon the recommendation of the Faculty.

The 7th and 8th sections relate to announcements, and pro-

vide for a report of the Treasurer of the Faculty to the Board of Trustees.

This proposition or agreement was signed, on the part of the University, by its Executive Committee, and by Drs. Rutter, Andrews, Isham, and Johnson.

At the same meeting, after the execution of the agreement, it was moved that the following professorships be established, *viz.:* Descriptive Anatomy, Physiology and Histology, Inorganic Chemistry, Materia Medica and General Therapeutics, General Pathology and Public Hygiene, Surgical Anatomy and the Operations of Surgery, Organic Chemistry and Toxicology, Medical Jurisprudence, Midwifery and the Diseases of Women and Children, Principles and Practice of Surgery, and the Principles and Practice of Medicine.

Dr. Rutter was nominated for Emerites Professor of Midwifery and Diseases of Women and Children; Dr. Johnson for the Chair of Physiology and Histology, but afterwards transferred to that of Materia Medica and General Therapeutics; Dr. Andrews to the Chair of the Principles and Practice of Surgery, and Dr. Isham to the Chair of Surgical Anatomy and the Operations of Surgery.

Drs. Johnson, Andrews, and Isham were appointed a Committee to invite Prof. N. S. Davis to accept the Chair of the Principles and Practice of Medicine, and Dr. W. H. Byford to accept that of Midwifery and the Diseases of Women and Children.

These gentlemen accepted the appointments, and subsequently participated in the complete organization of the College.

The two departments, Junior and Senior, were established, the first including Descriptive Anatomy, Pysiology and Histology, Inorganic Chemistry, Materia Medica and Therapeutics, and General Pathology and Public Hygiene; the second including the remaining branches, namely, Surgical Anatomy and the Operations of Surgery, Principles and Practice of Surgery, Obstetrics and Diseases of Women and Children, Practical Medicine, Medical Jurisprudence, and Organic Chemistry and Toxicology, with Clinical Medicine and Clinical Surgery.

These two courses were intended for students at different periods of their pupilage, and the arrangement of studies was such as to prepare the pupils in the first course, for the more practical branches of the second. This classification of the subjects of medical study, was, so far as I am aware, the first attempt in the United States, to make medical teaching conform to the methods that obtain in all other departments of education at home, as well as in all medical schools abroad.

A lecture term of five months was established. The fees were fixed at fifty dollars for each course, and examinations were required at the end of the first course, and this when the lecture term of the Rush College was sixteen weeks, and the fees thirty-five dollars. The Faculty commenced with the determination, that their inducements to students, should consist in neither short terms, nor a low standard of attainments, nor comparatively, in low fees even, but rather in their better methods and more extended range of studies. They considered medicine as a liberal profession, and they determined to strive for the broadest and most liberal culture on the part of those who should come to them for instruction.

They did not expect large classes, and were determined to make no sacrifice of principle to obtain them; but they did believe and know, that they if did not send out many graduates, those that should go forth from their halls, would be more thoroughly prepared for the work of life. How these expectations have been met, the many alumni of the College holding prominent social and professional positions, bear testimony.

The organization of the Faculty was completed by the appointment, subsequently, of Dr. J. H. Hollister to the professorship of Physiology and Histology; Dr. Mahla to the two professorships of Chemistry; Dr. M. K. Taylor to the professorship of General Pathology and Public Hygiene; Dr. Titus Deville to the professorship of Descriptive Anatomy, and H. G. Spafford, Esq., to the professorship of Medical Jurisprudence. Dr. Horace Wardner was appointed Demonstrator of Anatomy.

At a meeting of the Faculty, June 4, 1859, it was resolved, that the Faculty, through their delegates, invite the Illinois

State Medical Society to appoint a committee of two to attend the examinations of candidates for graduation in the Medical Department of the University, and *vote* upon their qualification for the degree of Doctor of Medicine. In extending this invitation, the College desired to furnish to the profession at large the means of judging of the success or failure of the method, and also to give the fullest guarantees, that with the sanction of this institution, none should be admitted to this responsible office, whose attainments were not satisfactory to those not immediately interested in teaching. This invitation was continued from year to year, but the State Society, either never made the appointment, or, if so, the committee has failed to respond.

In connection with the first course of didactic lectures, the Faculty established two Clinical professorships, to which Professors Davis and Andrews were appointed, securing to the student one lecture daily in the Mercy Hospital, at the bedside of the patient, and, also, two cliniques each week at the College, thus providing a more extended course of practical teaching than had ever before been given in the West.

The class attending this first session was small, consisting of but 33 members, of whom 9 received at the commencement exercises, the degree of Doctor of Medicine.

The Faculty had entered upon this experiment, for in one sense it was an experiment, with a firm conviction that it was the right course to pursue, they were satisfied also, that ultimately the schools must adapt themselves to the increasing intelligence and higher standards of education demanded by the community; they had, however, some misgivings as to the readiness of young men to devote to this work of preparation the increased time, and necessary expense. Among the class in attendance upon this first course of lectures, however, there was a larger proportion than at that time were usually found in medical schools, of young men thoroughly prepared by scientific and classical attainments for professional study. It was evident, then, that the better quality of students, sought, what every educated man, whose interests do not blind his judgment, admits to be the better methods.

The Faculty, therefore, were quite willing to labor and to wait.

Before the commencement of the second course of lectures, Prof. Deville, a most admirable teacher of Anatomy, resigned his professorship and returned to England. Prof. Hollister was transferred to the vacant chair, Prof. Johnson was appointed to the Chair of Physiology and Histology, and Dr. A. L. McArthur was appointed to the Chair of Materia Medica.

On the 24th of November, 1861, the Trustees requested the Faculty to release them from any obligations to furnish new rooms for the Department, but agreed to pay the rent of those they then occupied in Lind's Block for the remainder of the three years from date of the organization, as stipulated in their contract with the Medical Faculty. The financial embarrassment of the University, made this action of the Trustees, a necessity, but it was the occasion of much anxiety to the friends of the College. The Faculty, however, were not disposed to abandon their projects, but immediately made arrangements to provide for themselves.

In the Summer of 1862, Dr. McArthur resigned the professorship of Materia Medica. Prof. Taylor requested leave of absence for the coming Winter, having been appointed Surgeon of Volunteers in the U. S. Army. At his own request, Prof. Hollister was transferred to the Chair of Materia Medica, and Dr. J. S. Jewell, a graduate of the College at its first commencement, appointed to the Chair of Anatomy, and also made Demonstrator of Anatomy, Dr. Henry Wing was requested to give the course on General Pathology, in the absence of Prof. Taylor, and at the end of the course was appointed Professor.

The College continued to occupy the rooms in Lind's Block, on Market Street, during the session of 1862–3, paying to the proprietors the rent out of the College funds. In the Summer of 1863, the Faculty, by a unanimous vote, resolved to appropriate the proceeds of their lectures to a building fund, for the purpose of securing new accommodations for the institution. A contract was made with C. Follansbee, Esq., for the lot and building on State Street, recently occupied by the College. By

the liberality of one its members, the Faculty was subsequently entirely relieved from the indebtedness thus contracted. During this summer, Dr. M. O. Heydock was appointed to the professorship of Medical Jurisprudence, Prof. Spafford having resigned.

In the Spring of 1864, it seemed to the Faculty desirable, to change to some extent at least, their relation to the University. By a mutual understanding with the Trustees, each party to the contract was released from all obligations, and the members of the Faculty organized under the general incorporation laws of the State of Illinois, the Chicago Medical College, the members of the Faculty becoming the Trustees of the new body.

During this year some changes were made in the assignment of Chairs, Prof. Hollister was transferred to the Chair of Physiology and Histology, Prof. Wing to the Chair of Materia Medica, Prof. Johnson to the Chair of General Pathology and Public Hygiene.

In the Summer of 1865, Prof. Wing having removed from the City, was transferred to the Chair of Medical Jurisprudence, and Prof. Heydock to the Chair of Materia Medica and Therapeutics, and Dr. J. M. Woodworth was appointed Demonstrator of Anatomy.

During the year 1866, Dr. Daniel T. Nelson was appointed Professor of Physiology and Histology, Prof. Hollister was transferred to the Chair of General Pathology and Public Hygiene, Prof. Johnson having resigned, on account of ill-health, Prof. Patterson was appointed to the Chair of Medical Jurisprudence, made vacant by the resignation of Prof. Wing. In 1867, Prof. Mahla resigned the professorship of Chemistry, and Dr. John E. Davies was appointed to the vacancy. The Trustees created a new Chair, of Diseases of the Respiratory and Circulatory Organs, to which Prof. Johnson was appointed.

In May, 1867, there was held in the City of Cincinnati, a convention of delegates from the medical schools of the country: resolutions were passed recommending changes in the methods of study, substantially the same as those already adopted by this College; but advising four years of study, instead of three.

These propositions, no doubt, faithfully represented the opinions of those teachers when at a distance from their institutions, but they had altogether a different set of ideas, when the question was presented in its financial aspects, at home.

At a meeting held April 25, 1868, this Faculty arranged three courses of lectures consisting of groups of subjects or studies, for each of the three years of pupilage. Up to the present time, however, while recommending the student to attend one course during each year, it has not been found practicable to *require* this as a condition for graduation.

These three courses of lectures, not repetitions, the one of the other, but separate, distinct, and successive, constitute a more complete and extended curriculum of study, than that adopted by any other college in the United States.

During the year 1868, Prof. Davies resigned the Chairs of Chemistry, and Dr. C. Gilbert Wheeler was appointed to the position thus made vacant. The late Dr. Joseph L. Hildreth was invited to deliver a course of lectures on Ophthalmology and Otology, the Chair of Public Hygiene was detached from that of General Pathology, and Dr. Thomas Bevan appointed Professor.

During the year 1869, changes were also made in the Faculty, Prof. Jewell having resigned, Dr. H. W. Boyd was appointed Professor of Descriptive Anatomy; Dr. E. O. F. Roler was appointed an additional Professor of Obstetrics and Diseases of Women and Children; Dr. J. S. Sherman was appointed Adjunct Professor of the Principles and Practice of Surgery; Dr. Woodworth resigned the position of Demonstrator of Anatomy, and Dr. Thomas Bond was appointed to that office.

During the same year, an arrangement, mutually satisfactory, was made with the Northwestern University, by which the Chicago Medical College, became the Medical Department of that institution, its own organization, control of professorships, and of the curriculum of study remaining unchanged. The ground occupied by the present building, belonging to the proprietors of the Mercy Hospital, had been previously secured for the use of the College. By the terms of the contract between the

Trustees and Hospital authorities, the Faculty of this Institution became the medical officers of the Hospital, and are required to give in its wards, such clinical instruction as the interests of the College demand; the services of these medical officers to be considered as payment in full for the ground-rent of these premises, for at least twenty years, and so much longer as the adjacent building shall be occupied for hospital purposes. It is believed that the interests of both parties to this contract, is met in the permanent relations thus established. The material result of these arrangements with the University, and the Society owning and controlling the Hospital, is the elegant and convenient building, in which we are to-night, for the first time, assembled. It is not only architecturally attractive, and admirably adapted to medical teaching, but its location and relations to the Hospital are such, that for all practical purposes, that institution becomes a part of the college organization. Each Didactic Chair has its corresponding Clinical Chair in the Hospital, where the theories of the lecture-room are daily tested at the bedside of the patient. In this respect, also, it differs materially from most medical schools of this country, and, to the same extent, approximates in its means, as well as in its modes of teaching, the best institutions of the old world.

During the present year, the corps of instructors has been still further increased; Prof. Wheeler has resigned the two professorships of Chemistry, and the Trustees have appointed Dr. N. Gray Bartlett to the Chair of Inorganic and Practical Chemistry, and Dr. H. P. Merriman to the Chair of Organic Chemistry and Toxicology. In consequence of the large and increasing number of pupils engaged in the study of analytical chemistry, this division of the work had become absolutely necessary. A Chair of Diseases of the Eye and Ear has been definitely established, and Dr. Samuel J. Jones appointed Professor. Prof. Jones is now in Europe, or on his way home, and, with all desirable means of illustrating his department, will commence his course on the first of November. Prof. M. O. Heydock has resigned the professorship of Materia Medica and Therapeutics, and Dr. Wm. E. Quine has been appointed to the vacancy.

Since the organization of the College, eight hundred and eighty-nine (889) students have been in attendance upon its lectures, and two hundred and eighty-nine (289) have received the degree of Doctor of Medicine. Six of its Alumni are now members of its own Faculty, and several hold similar positions in other institutions.

From the period of its inception to the present, it has been both growing and developing. For the last eighty years, other medical schools have only grown. Almost nothing has been added to the number or perfection of their organs. In their relation to the times, and the intelligence of medical students, they are sadly out of joint—a kind of compound dislocation. In the number of teachers, and breadth of study, hardly a change has been made. The increase in the lecture-term, from three to four or five months, constituting, with very few exceptions, the only improvement during the last three-quarters of a century.

At the time of the organization of this College, the number of lectures, comprising the entire course of instruction in the Rush Medical College (and I refer to it because it is a fair representative of the medical colleges of the country) was five hundred and seventy-six (576). The number in the entire course of this college was at the same time one thousand and eight (1008). At the present time, the number constituting the entire course of medical instruction in the Rush Medical College, remains substantially the same, while the entire course in this institution is thirteen hundred and eighty (1380), an increase of three hundred and seventy-two (372) lectures. In other words, the amount of teaching given by the Faculty of this College is about two and one-half ($2\frac{1}{2}$) times as much as that given by the majority of the medical schools of the country, while in the enlargement of its corps of teachers, and the still further classification of the subjects of study, it has spared no effort to adapt itself to the constantly increasing culture and higher scientific attainments of the times.

We have thus rapidly traced the history of this school for the purpose of showing to you, gentlemen, that it can help you in

your work of education more than other colleges by presenting to you, first, more truths and more facts, and, second, by presenting them in a better order—not, as the printer would say, a mass of type set in "pi," but set in up form, corrected, and ready to give a perfect impression.

In view of all these facts, we think we may justly claim for this College the confidence of the public and the profession. Its Faculty and Trustees have earnestly labored for the honor and usefulness of our noble calling. They have not been deterred by the ridicule or misrepresentations of those who could not appreciate honest effort, and to-day, entering as they do upon a new era in their history, one so full of encouraging promise and comforting vindication, with a better knowledge of the wants of students, and of the best methods at home and abroad, with enlarged appliances and means of illustration, affording opportunities for clinical study and for experience in practical chemistry unsurpassed anywhere upon this continent; they offer to you, gentlemen, a cordial welcome. Welcome to these halls where science shall place a sure foundation for the temple of your art. Welcome to all that we can do for you as teachers, as counsellors, as friends. Welcome, also, to yonder Hospital, where you may study the perturbed motions of the soul's most wondrous engine—where your hearts may be touched with sympathy as you listen to the wail of its broken harp, and learn how most surely and tenderly you may repair its disordered mechanism—tune again its discordant strings, and fill all the halls of being with the sweet harmonies of healthful, vigorous life.

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ARTICLE XXXV.

## VARIOLA.

BY EDWIN A. CARPENTER, M.D., Baileyville, Illinois.

During the past winter months we had an endemic of unmodified variola. Not a case, as far as my knowledge extends, presenting variolous symptoms, where they had ever been vaci-

nated. The disease is ushered in with a well-pronounced chill, succeeded by considerable febrile movement, after which some slight perspiration takes place; the chills and fever continuing until the appearance of the eruption. Pain is referred to the epigastrium, with tenderness on pressure, with nausea and vomiting as the rule. Cephalolgia pain in the lumbar region and limbs, bowels constipated (usually), urine scanty and highly-colored; delirium is an occasional symptom. These are the usual symptoms of the stage of invasion. To be brief, I will not descant upon the different stages, except incidentally, as the main object in view is the treatment which differs from most medical writers on the subject. The mode of dying (where death takes place) is by asthenia. The question very naturally arises here, what produces this asthenic condition, is tissue metamorphosis sufficient to produce death? I think not. The urine being diminished in quantity, there remains in the economy, urea and uric acid, producing their toxicological effects; these, as well as all excretory products, are formed in the blood; they exist, therefore, in the blood in health, and it is their accumulation in an abnormal quantity which constitutes the morbid condition; the kidneys secreting so small a quantiny of urine, are inadequate to a proper elimination of this excrementitious substance, consequently, we have urmiæa, which is a form of blood-poisoning—sometimes called toxæmia, which enters largely into the ausation of the morbid phenomena, and consequently of great importance in its practical relations to variola.

Uræmia may be inferred, whenever in connection with its characteristic pathological effects, the secretion of the urine is suppressed, or the quantity greatly diminished. The symptoms during the stage of invasion, are indicative of congestion of the kidneys, if not of nephritis, *viz.:* pain and tenderness in the loins, pains in the abdomen, urine scanty and highly-colored, and sometimes frequent attempts at micturation. We are advised by most medical writers, to omit the use of active cathartics, but as the kidneys are inadequate to a proper elimination of urea and uric acid, what better mode of vicarious elimination than by the intestinal canal? Put the disordered kidneys at rest

by causing the intestinal canal to perform their office as far as may be, and in conjunction with, elimination by the skin, their office can be performed effectually in variola, at least, all things being taken into consideration, hydragogue cathartics are a necessity for the welfare of our patient. I prefer *elaterium et podophyllum*, purging the patient freely, then, unless the pains in the head, *epigastrum*, and lumbar region are mitigated, give a hot-air bath until copious perspiration is produced, after which the recipient will feel like a different being; in all probability the affected will not be obliged to keep the recumbent posture until the suppurative stage supervenes; with the change of the eruption to pustules, there is a recurrence of the febrile movement, constituting what is known as the suppurative fever; the pulse is increased in frequency, perspiration ceases, the temperature is increased, etc.; we now have another blood-poison to deal with, caused by the absorption of pus, if skin, kidneys, and bowels are in a morbid condition, they soon eliminate the morbid matter, if not, eliminants are necessary to arouse the excretory functions of the system; where the eliminative treatment is carried out, we are rid, to a great extent, of the sequaæ of the disease, which is the result of toxæmia, *viz.:* feruncules and abcesses; at the decline of the suppurative fever quinia sulphas given as a tonic, and an eliminant, is a remedy which has proven itself peculiarly adapted to this stage of the disease.

As an ectrotic, B. T. Buckley, M.D., Freeport, Illinois, has found lime water and linseed oil (carron oil) efficient, keeping the patient in a darkened room. In my practice, I have tried a variety of vaunted remedies, but found them useless. It would not enhance the value of this article to speak of concomitant affections, alimentation, purity of atmosphere, disinfectants, etc. I wish to call the attention of the profession to the *blood-poisoning*, believing, as I do, that the retention of the effete matters causes death in variola. The foregoing is the theory on which I based my treatment in twenty cases (all I had) of the distinct and confluent varieties, ranging from 6 to 74 years of age. Not a single case resulted in death, neither was the sight or hearing impaired in a single instance.

ARTICLE XXXVI.

# A RARE FORM OF CARDIAC DISEASE.

BY N. S. DAVIS, M.D., Etc., Etc., Chicago.

[Presented to the Chicago Medical Society.]

Mr. S., aged about 26 years; American; married; applied to me for advice six or eight months since. He was spare in flesh, anemic in appearance, yellow or jaundiced in the color of the skin and conjunctiva; and complained of indigestion; general muscular weakness; shortness of breath on attempting to exercise; irregular pains in the right hypochondriac region; and occasional sharp pains in the region of the heart. His bowels were irregular, sometimes loose and at others costive; urine scanty, dark brown, and often mixed with blood. Physical exploration revealed no evidence of disease of the lungs, or enlargement of any of the abdominal viscera. The rythm of the heart was normal, but the first sound was accompanied by a peculiar *flap*, a quality not easily described. It differed from the bellows sounds that accompany either extreme ænemia, or valvular roughness. The systole was short and quick, with a occasional intermission. He had completed a Collegiate and Theological course of study, supporting himself by teaching music. While making some physical exertion in the open air, at the age of 12 years, he suddenly fell as though seized with spasms. But the general failure of his health was not much manifest until he was in the midst of his studies in College and teaching at the same time; and hence the failure had been attributed to over-tasking himself, both mentally and physically. By proper regulation of diet and exercise, aided by mild tonics, the functions of the stomach and kidneys were much improved, and he continued to attend to some business until about the first of August, 1870. He was then attacked with symptoms of dysentery, coupled with a few paroxysms of intermittent fever, which appeared to greatly prostrate him, and all efforts at exercise were attended with palpitation, shortness of breath, sense of exhaustion, etc., with momentary severe pains in his chest.

A few days treatment relieved the fever paroxysms, and improved the state of the bowels, but he continued very week, and the action of the heart quite irregular, with some œdema and coldness of the extremities. While in this condition he was attacked with copious hemorrhage from the bowels, which proved speedily fatal.

Twenty-four hours after death a *post mortem* examination was made by Prof. H. W. Boyd, assisted by Dr. Ward and a Student. They reported no morbid appearance in the viscera of the abdomen except congestion, and perhaps slight softening of portions of the mucous membrane of the ilum and colon, and increased vascularity, with some fatty degeneration of the kidneys. The liver and spleen were reported healthy and of normal size. The lungs appeared healthy except numerous deposits of dark pigmenty matter in the upper and anterior parts. The heart was about the natural size, pale in color, with a little more accumulation of fat over its base than usual. On cutting through the walls of the ventricles the muscular structure was found thinner and paler than natural on both sides, but more especially was this the case in the walls of the right ventricle, where the muscular structure had been partially replaced by fatty tissue. A white tough fibrous clot or mass was found in the left ventricle, which continued into the aorta four or five inches, but did not appear to be attached or adherent to any part of the cardiac structure. In the right ventricle was found another mass, more white and compact than the one in the left. It was nearly cylindrical in form, and extended from the apex of the ventricle into the pulmonary artery, beyond the point where the latter vessel was severed in removing the heart from its position in the chest. This body was closely attached to and completely identified with the free edge of the anterior lobe of the tricuspid valve, but was free from all other attachments. The semi-lunar valves of both sides, the mitral, and the lobes of the tricuspid appear entirely free from thickening, or signs of disease, except just the edge to which the contained body is attached. The heart was presented and examined by the members present with much interest. Was the body in the

right ventricle and pulmonary artery a true excresence or polypoid growth from the edge of the tricuspid valve? And was it this that had been for many years embarrassing the circulation and respiration, and rendering a satisfactory diagnosis difficult? Or was this a simple fibrinous formation, (a thrombus), and the apparent identification with the edge of the tricuspid valve a mere accidental adhesion. The latter is probably the true state of the case. Yet, the firmness of the adhesions; the cylindrical form, and density of the thrombus, together with the preceding history of the patient, indicate that it had been in existence a long period of time. That in the left cavity is evidently of more recent formation.

## ARTICLE XXXVII.

## A CASE OF PUERPURAL CONVULSIONS—TEDIOUS LABOR, ETC., ETC.

By N. S. DAVIS, M.D., Professor Practical Medicine.

Mrs. M., a lady aged about 30 years; below the medium size; nervous temperament; was married little more than seven years since.

Previous to marriage she had suffered some from dysmenorrhœa, and, soon after marriage, there was added slight leucorrhœal discharge, with a sense of pressure behind the pubes; a disposition to urinate more frequently than natural, and moderate constipation. The urine, however, was natural in quality and quantity, except occasionally, when she had paroxysms of palpitation and sleeplessness, when it would become abundant and limpid. After she had been married three or four years, and not becoming pregnant, while the foregoing symptoms were slowly increasing from month to month, she sought medical advice. From the commencement of her married life, she had been anxious to become a mother, and felt much disappointed that pregnancy had been so long delayed. On making a vaginal examination, I found the neck and os uteri small, hard, and

turned slightly backward, while the anterior wall of the body of the uterus rested against the bas fund of the bladder, and the anterior wall of the vagina appeared unusually short. In other words, the neck and os were small, with partial anteversion.

These conditions explained the pressure behind the pubes, and the desire to urinate often, but were hardly sufficient to explain the entire exemption from pregnancy. The general health and nutrition were good, although subject to periods of nervousness, more especially at her monthly sickness, which was very regular in its recurrence. About three years since, while I was absent from the city, she was under the care of Prof. W. H. Byford, and she spent the following winter in Florida, with some friends. With the exception of some nervous paroxysms, her general health remained good, and her menstruation regular.

Little more than a year since, she again consulted me, with direct reference to her sterility. Examination revealed the uterus and vagina in the same conditions as previously described, except a little more tenderness on pressure against the anterior and lower part of the uterus, sending some pain in the direction of the left ovarium. The opening through the os and uterine neck was not contracted, and the amount of menstrual fluid was sufficient. Neither was there any discharge from the os indicating inflammation in the uterine cavity. There was, on the outer margin of the os, a slight abrasion, with undue redness, to which I applied a solution of nitrate of silver several times, and it entirely disappeared. She also used, once daily, a solution of sulphate of zinc, and morphia—(10 grains of the first and 1 grain of the second, in 3 ounces of water)—as a vaginal wash. Every effort to correct the partial anteversion was fruitless, apparently, from the shortness of the anterior part of the vaginal walls. Thinking it might modify favorably the nervous system of organic life, I gave the patient, internally, the liquor arsenicalis, or Fowler's solution, in doses of 8 drops, at each mealtime, well diluted with water. She continued this course of treatment, with occasional inter-

ruptions of a few days at a time, for about three months, when the failure in the appearance of the menses at the proper time, with a characteristic nausea, created suspicions of pregnancy. Time proved the correctness of these suspicions. During the first four months, she suffered almost constant nausea, with more annoyance from a frequent desire to urinate than previously; but, otherwise, her health continued good through the whole period of pregnancy. After the supposed full completion of the period of pregnancy, I was called, hastily, on the morning of the 21st of September, 1870, the messenger stating that the lady was in convulsions. On arrival, she had just recovered from a severe paroxysm of general convulsions.

The pulse was only slightly accelerated; skin natural; pupils of eyes natural; mind clear; and urinary secretion apparently free. She had complained of headache several days, and the pain had been severe during the preceding night. There were no labor pains, and an examination, per vagina, showed a full development of the neck, and os uteri, but no dilatation whatever. Indeed the finger could detect no opening, the whole uterine surface within the vagina appearing smooth and firm, with the head resting against it, without any perceptible amount of intervening fluid.

Hoping to relieve the headache, and prevent the recurrence of convulsions until the labor-pains should come on, I directed a solution of bromide and iodide of potassia (15 grs. of the first and 5 grs. of the second) to be given every two hours. Saw her again about 5 o'clock P.M., the convulsions having recurred with considerable severity, three or four times during the afternoon.

Her face was now flushed; head hot and painful; pulse and respiration moderately accelerated, but no labor-pains, and no dilatation of the os uteri.

I opened a vein in her arm and took about sixteen ounces of blood, which gave immediate relief to the headache. This was followed by a powder of calomel, 5 grs., leptandrin, 3 grs., and bi-carb. soda, 5 grs., to move the bowels, and 15 drops of tincture of Calabar bean, every two hours, in the place of the bro-

mide and iodide of potassa. She passed the night comfortably, the bowels moving two or three times, the kidneys acting about natural, and no recurrence of the convulsions or headache. There were slight pains in the lower part of the back, but no perceptible change in the condition of the os uteri. During the day, the pain in the back increased and became regularly paroxysmal, recurring every twenty or thirty minutes, but not severe. The head of the child was pressed more firmly downward, and the walls of the uterus, as felt through the vagina, were thinner, but still no opening of the os. During the first part of the night, the labor-pains steadily increased in force and frequency, and her general condition remained good.

The head of the child had fairly entered the superior straight of the pelvis, the uterine walls felt thin and tense from the pressure of the head, but no indication of liquor amnii, nor any dilatation of the os. A very careful examination with the finger, during the latter part of the night, finally identified the os uteri with an opening hardly large enough to admit a quill. By working, in the absence of the pains, when the parts were more relaxed, I succeeded in insinuating my finger into the opening. The edges of the os were very thin, but firm and with each pain, contracted like a sphincter muscle. By careful and persistent efforts with the finger, for more than two hours, the rigidity of the os was finally overcome, and the labor appeared to progress well, though slowly. By 10 o'clock A.M., of the 22d, the head of the child occupied the cavity of the pelvis, but not low enough to rest on the perineum, and the mouth of the womb had not fully receded over the head. Then the labor became stationery; and though the pains continued regular, and with a fair degree of force, hardly any progress was made for three hours. The patient becoming more restless and wearied with the tediousness of the labor, I succeeded in carefully adjusting the forceps and completing the delivery; but it required a full hour, making the traction with the natural pains, and finally increasing the force to the full extent of my ability. The child was partially asphyxiated, but soon recovered its respiration. Laceration of the perineum was wholly avoided, and

mother and child progressed favorably, and are now in good health. I have thought this case worth recording, as having some bearing on the following questions: 1st. Did the use of the arsenical preparation have anything to do with the supervention of pregnancy after more than six years of barrenness? 2d. Did the use of the tincture of Calibar bean aid materially in preventing the continuance of the convulsions? That the *bleeding* was of essential service I have no doubt. The immediate relief to the headache and fever were so marked as to leave no doubt of its beneficial influence. I have had opportunity to use the Calibar bean in only two cases of puerperal convulsions—In both the patient recovered; but how much influence for good was attributable to this remedy I am unable to say—I only call attention to the facts.

## Original Translations.

### A NEW REMEDY FOR CATARRH.

A recent number of the *Heilbronn Memorabilien*, (Germany,) contains the following resume of an article on the nature and treatment of Catarrh, by Dr. M. Frank, of Munich.

Nasal Catarrh should always be regarded as an infectious disease. The infectious principle is chiefly transmitted to the nasal passages in the air of respiration, which very soon manifests its action in a profuse watery secretion from the mucous surfaces. The affection is then propagated along the lachrymal ducts to the conjunctival membrane, into the pharynx, Eustachian tubes, larynx, trachea and bronchial tubes, with the accompanying train of symptoms in these organs; or the affection may extend down the œsophagus, into the stomach and intestinal tract, with the corresponding morbid phenomena. In most instances, where the intensity is not great, it runs its course in from seven to eleven days. With many the febrile state, sense of weakness, and feeling of discomfort generally

are so great that the patient will take to his bed, or the necessity of continual cleansing of the nostrils, or sometimes the just appreciation of the danger to others, will cause him, for the time being, to avoid all society.

The constant neglect of colds, or ordinary catarrh, on account of its being regarded a trivial affection, is a matter of daily observation, and which led Hufeland to assert that a greater number of people died of it than from the pest.

Dr. Frank recommends the following treatment, which he has practiced for two years, with constantly favorable results:

Immediately on the approach of the first symptoms in the nasal passages the patient is directed to use a weak solution of the hypermanganate of soda as a disinfectant.

Enough of the hypermanganate is added to a goblet full of water to give it a cherry red color.

A handful of this solution is snuffed up the nostrils every couple of hours, using the precaution to blow out carefully after each operation. If the pharynx has become affected, the same should also be used as a gargle. Usually before the end of the second day all symptoms have disappeared. E. O. F. R.

## Correspondence.

TOWANDA, MCLEAN CO., ILL., *Oct. 15, 1870.*

DR. N. S. DAVIS, — DEAR SIR, — Herein I send you an imperfect report of a case that occurred in my practice a few days since — the first of the kind that has occurred to me in a practice of over twelve years.

On the night of the 11th inst., I was called upon to visit a child some five months old, that was reported to be suffering intensely from a colic, and had passed some blood. I visited the child as soon as I could — it being some miles in the country — and found that the child had been suffering excruciating pain, coming on every few minutes, since about 4 o'clock the previous evening — it now being about 3 o'clock in the

morning. At the time of my arrival the child was not suffering as much as it had been. Thinking that the trouble, whatever it was, might be subsiding, I gave the child one drop of tinct. Opii., and directed that it be repeated as often as every four hours, if the child still continued to suffer, and at the same time to use warm water injections, with a few drops of oil turpentine in each injection. The parents stated that the child had always been troubled with costiveness. After staying some two or three hours I left, with the injunction that if the child should get worse again, to let me know immediately. About 12 o'clock of the same day I was sent for again, saying that the child was no better, and had been passing more blood. At this time it occurred to me that it must be a concealed *hernia*, or an *intussusception*, and that I must prepare myself accordingly.

I found the child about the same as it had been the previous night, and at short intervals straining to stool, but passing nothing but blood, and as no fecal matter had passed, I felt satisfied that there must be an obstruction in the bowels some place.

I again examined the child for hernia, but finding none, concluded that it must be an invaginated bowel, and upon passing my finger—previously well oiled—up the rectum, I found the bowel hanging down within itself, and tried to replace it, but it would return as my finger was withdrawn. As the case was still recent, I thought best to reduce the displaced bowel if possible. I had no other means at hand than a valvular India Rubber ball syringe and warm water. I managed to inject near one-half gallon of water into the child's bowels, which satisfied me that I had found a hole somewhere, and upon examination, to my infinite satisfaction, found the Intussusception gone.

I directed the continued use of the opeate as before, to keep the bowels quiet for a time, and bowels to be filled with warm water again if the trouble should return.

At this date the child is apparently well.

Yours respectfully,

E. HOLDERNESS.

## ENCEPHALOID CANCER OF THE LIVER.

WATERTOWN, WIS., *Oct. 8, 1870.*

DEAR "EXAMINER,"—If you think it of sufficient interest you may record the following:

Mar. 28th.—J. R., age 50, farmer, called at my office for treatment. Said he had been troubled at times, for years, with distress and sensation of burning in epigastrium. Had taken various remedies from different ones for "biliousness" and "worms," sometimes with apparent relief, more frequently with none. He had for some time past been troubled much more than usual.

He then complained of constant burning in stomach, and was not able to eat certain kinds of food, owing to increased distress produced. Tongue constantly coated and obstinate constipation. General health merely normal; working some, and walked on that day 15 miles. Could not sleep on back or left side. Never troubled with vomiting, though lately he would regurgitate certain kinds of food. Careful examination was made, owing to peculiar history. Nothing found with stomach different from what we usually find in chronic folliculitis of that organ. Liver seemed a little enlarged, still not so much as to be certain of it.

Not satisfied with what I found, I told him to return in two weeks, and gave him directions for improving digestion, etc.

April 12th.—Came again. He was quite satisfied with result of treatment. No change in size of liver. Less tenderness over stomach. Constipation disappearing; appetite better, but still not able to sleep on back or left side. Made few changes in treatment, and told him to call again if not better.

May 4th.—Was called to see him. Found him anxious about extreme anasarca of lower half of body, and almost complete anuria, which had taken place the preceding night. Said that he had continued feeling much better since his call at my office, and thought he "would be all right if he could get rid of the *dropsy*." That night he felt that he could sleep on his back, and thought he would try it. While attempting to dress he

found his feet and legs greatly enlarged. As the œdema was confined to lower half of body, I searched for a local obstruction to venous circulation of vena cava. This I found in enlarged liver, the border of which could be distinctly felt below the ribs; hepatic dulness, extending over a much larger surface than at first. No pain; countenance anxious; skin yellow; eyes fearfully white. Loss of appetite and some nausea. Ordered a hot-air bath, a mild diuretic, and that he should be constantly on his right side, regarding the symptoms as due to pressure of the enlarged liver on the vena cava. Seeing a hopeless case of cancer I could do nothing but palliate symptoms.

May 6th.—Found patient and friends hopeful, as anasarca was greatly diminished, and urine free and normal. The liver, however, had extended over one-half inch lower in two days, and nodules could be felt in several places over it. Told the friends what termination would be.

May 8th.—Some favorable changes in patient's symptoms, but still an increased decent of one inch. Hoping that my diagnosis was exaggerated, they wished for counsel.

May 10th.—Brought Dr. Cody, who confirmed what had been said. Lower border of liver not far from umbilicus; cachexia decided. Not much anodyne needed throughout the treatment. This rapid growth continued till the abdominal cavity was nearly filled.

Hiccough set in about the 14th, but was controlled with arom. spits. am. to a great extent. Would take no medicine towards the last but this, for the distress from the hiccough was very irritable, and became quite helpless from œdema till the 22nd, when he died, 18 days from the time the liver began rapidly to enlarge. No autopsy; abdomen at death was greatly distended, hard, and nodular.

The interesting features of this case are: obscure approach, with apparent amelioration for 5 weeks, under hygienic and dietitic regulation, rapid growth, immense size, and freedom from great pain.

T. G. WILLIAMS.

# Selections.

## HOSPITAL REPORTS—UNIVERSITY OF PENNSYLVANIA, SEPTEMBER 12, 1870.

Clinic of J. E. GARRETSON, M.D., Lecturer on Surgical Diseases of the Mouth, Etc.

(REPORTED BY DE FOREST WILLARD, M.D.)

### ANGIONOMA.

GENTLEMEN: I have to present to you this morning, two patients, both infants, who will well illustrate almost the two extremes of a class of tumors known as vascular or erectile growths, or, as often called, *nævi.*

Upon the cheek of the first you will notice a small, dark spot, scarcely distinguishable, yet sufficient to attract the eye of the anxious patient. It is a "mother's mark," and is an insignificant, harmless, little tumor, requiring but a simple operation. The other, a colored babe, æt. 6 months, has, as you perceive, a tumor upon the cheek, in the neighborhood of the angle of the jaw, and extending into the parotid region, of the size of a small orange, which, as you will soon discover by the history, is a grave and serious lesion, requiring an operation of such magnitude as to place the life of this child in jeopardy.

The mother informs me that this was discovered soon after birth, but was then of small size; that it has been steadily growing, and that for the last few weeks it has increased with such alarming rapidity that she has been sent to us from the country, to ascertain whether there be any hope of operative relief, for she fully understands that the child must die, either from rupture or ulceration of this mass, with its consequent hemorrhage, unless it can be removed.

You will see that this tumor is soft and elastic; that it pulsates strongly, synchronously with ventricular sistole; that its size can be diminished by steady pressure, and that it enlarges whenever the child makes any violent exertion, as in crying, coughing, etc. It is, therefore, an erectile growth—a congeries of dilated bloodvessels; tortuous arterioles and capillaries, bound together by subcutaneous connective tissue; it is a vascular tumor, and belongs to the same class as the nævi.

The color of these vascular growths depends upon the excess in their composition of either the arterial, venus, or capillary element, and this color does not gradually fade out into the

surrounding tissues, but is abrupt in its definition, owing to the fact that the tumors are usually supplied by one or two large bloodvessels, while their vascular connection with adjacent parts is but moderate, and the smaller nævi are evidently but a hypertrophy of the radicles of these principal vessels.

In the tumor before us we have one which is largely arterial. It is what is often called an "aneurism by anastomosis," but it is not, properly speaking, an aneurism, but is an enlargement of the terminal branches of these vessels of supply, and is, in fact, an exaggerated nævus, its variation being in degree, not in kind. The same remark will hold good in regard to the venous tumors so often found, which differ only in having an excess of venous dilitation. They may differ widely in degree, but they all belong to one genus,—they are vascular, "bloody" tumors.

For the relief of such a lesion as this, a cutting off of the source of supply would at once suggest itself; but should we cut down and tie the external carotid, we know that the anastomoses of the arteries of the face are so intimate with those of the opposite side, as also with the internal carotid by means of the nasal and other branches of the ophthalmic, that we should not thus be able to check the current; nay, further, should we even ligate the common carotid, we might still have the supply kept up by the circuitous but constant route of the profunda cervicis from the subclavian with the princeps cervicis from the occipital, a branch of the external carotid, a circulation being thus quickly established, and our object defeated, after all the dangers of such an operation. This method, therefore, will not be adopted; but we will take the surer plan: that of excision. This, truly, will be a formidable operation, when we consider how vascular are these parts, even in the normal condition, and the close proximity of such large arterial trunks as you will see by this dried preparation; and I doubt not, ere the excision be completed, we shall be down upon the carotids themselves; yet, with proper care, and due attention to the prompt ligation of all severed vessels, I think we shall be able to remove it without sufficient loss of blood to endanger the child's life.

We shall not, however, endeavor to remove this mass entirely by the knife, but shall first cut away all the surrounding structures, and then throw a strong ligature around its base, thus strangulating the remaining portion, and ridding ourselves of the greatest source of alarming hemorrhage, *i. e.*, the last few incisions which would cut the great vessels supplying it.

When the tumor is small, as in the first case before us, *strang-*

*ulation* is the preferable method, either by encircling the mass as a whole, or, as the skin is somewhat liable to take an erysipelatous inflammation, by first circumscribing it with an incision of the skin, and then directing the ligature into this cut surface. Another method is to pass a double ligature through its base, and tie it in two portions. The second method is best, in my estimation.

Another mode of cure in these small growths is by the action of pressure, either by means of a compress, or by the use of collodion; but this procedure is only applicable to certain situations. Needles, heated to whiteness, have also been passed through the base of these tumors, and have sometimes been followed by cure.

Electrolysis has also been of service in some cases of nævus, but it is limited in its application, and is so slow in its action that patients usually prefer the more rapid method of excision or ligature. The great difficulty to be encountered in the cure arises from the fact that occlusion of a veinule or other radicle seems to have but little influence upon its neighbors, thus necessitating repeated operations until the electrolytic action has directly influenced almost each individual vessel. Moreover, since electrolysis cauterizes the tissues, as well as coagulates the blood, it is evident that a slough must ensue, provided the superficial portion of the skin be much affected, and, if such an occurrence must take place, with its consequent cicatrix, it is preferable to have it occasioned by the more speedy action of a ligature. The slough of galvano-puncture is, however, perfectly devoid of hemorrhage, since it is tardy in its separation, and is remarkable for its extreme dryness.

These objections to its use, however, only apply to nævi which are superficial, or when the skin is implicated. In subcutaneous nævi, the operation possesses the advantages of being more safe and certain than injection, and in cases where no slough is necessitated, we dispense with the scar of an excision or ligitation, that is, provided insulated needles are employed.

A Bunsen or other battery may be used, the number of needles varying with the size of the tumor; but, in all cases, care should be taken not to carry the action beyond the whitish hue, indicative of cauterization.

In regard to the introduction of gas into the circulation by this method, I do not think there is the slightest danger in cases of nævus, though spoken of by Rutherford and other able writers on electro-therapeutics.

In cases of huge nævi, or vascular tumors, like the one before

us, this course might be pursued with advantage, especially when excision is hazardous, but I think we shall be able to accomplish our object in perfect safety with the knife and ligature, saving much time and trouble by such a course.

Another mode of removal of nævi is by the use of caustics, such as chlor. zinc, corrosive sublimate, Vienna paste, or the strong acids, and a cure is usually affected by a separation of a slough and healing of the ulcer.

The seton is sometimes used, and its presence occasionally causes sufficient inflammation to obliterate the vessels and leave behind no perceptible scar.

Hypodermic injections were at one time quite in vogue, but owing to several deaths which have occurred from the carrying of clots into the circulation, have fallen into disuse. The substances used were iron, nitric acid, iodine or creasote.

A method practiced by some English surgeons is that of "piece-meal" removal, *i. e.*, picking out the mass, or tearing it away, fragment by fragment, the object being to prevent hemorrhage, upon the same principle as tortion of arteries.

From all these operations, then, we must select the one most suitable to the case upon which we are to perform it, and each will be found applicable to certain localities or conditions; as a rule, however, I prefer the use of the knife to circumscribe the tumor, then to be followed by the ligature.

In regard to the time of operation upon an infant, I will only say that we should always remember that a nævus may spontaneously disappear, or atrophy a few weeks after birth, or it may ulcerate and thus destroy all the unhealthy tissue; still this event is so rare that we need not wait long for its occurrence. The age of the child will not make any great difference. Its condition will, however, vastly influence the result, *i. e.*, a child, who is teething, or has just recovered from measles, cholera-infantum, etc., will be much less likely to bear an operation well, than one who had fully recovered from such a difficulty. Put your patient in a good, sound health, and then operate, no matter what may be its age.

[Two incisions, each two inches in length, and crossing at right angles, were then made through the integument, and the four flaps dissected off the tumor. The knife was then carried through healthy tissue, completely about the mass, each artery being compressed or picked up, as it was divided, so that comparatively little blood was lost. As the deep portions were reached, it became necessary to cease the incisions on account of the size of the arteries, and a strong ligature was then

thrown around the base, tightly strangulating the remainder. The wound was dressed with carbolic acid oil; stimulants and anodyne were freely given, and the infant soon rallied. On the fifth day the slough separated, and the flaps, which had before been left loose, were laid in place, and secured by hare-lip pins and the interrupted suture. The cure has been most satisfactory. DE F. W.]

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DEFORMITY OF THE MOUTH—DIEFFENBACH'S OPERATION.

The next case which I have to show you is Robert C., æt. 11 years; suffering from a deformity of the mouth, resulting from the contraction of a cicatrix of a slough, which slough was one of the many concomitants of scarlatina, a disease which, as you know, may be followed by lesion of almost any structure or portion of the body.

You will perceive, the left angle of the mouth is drawn downward and pulled in, or puckered in such a manner as to give an unpleasant appearance to his face, and he desires us to rectify this condition. This is not a common condition, yet it is sometimes met with from wounds, bruises, etc., and we must study the complications which exist in each case, governing our operation by the extent and character of the contraction.

In looking at a case of this kind, you must bring to bear upon it all your artistic, as well as surgical, skill; you must look at and view it in different positions, until you have decided what alterations are necessary to bring this deformed mouth into a normal condition, with the labial curves and commissures in their usual beautiful symmetry; and, in order to do this, map out in your mind, or, still better, in ink upon the face, the proper outlines of a perfect mouth; then you can arrange your incisions to suit the particular deformity.

In the present instance, the contraction is not so great as is often seen, where the orifice is sometimes so small as scarcely to admit of the passage of the little finger, and is, therefore, comparatively an easy case.

For the relief of this difficulty, our first thought would be to merely incise the commissures to the required extent; but, unfortunately, such a procedure would only be followed by speedy union and greater consequent contraction than before, since it is impossible to prevent union of the fresh surfaces, even though tents, lead, etc., be placed between the edges.

Mechanical dilitation gives severe pain, and does not produce any permanent good.

The only method which has proved of service has been that

of Dieffenbach, of Berlin, which is performed by the surgeon first introducing the fingers of one hand into the mouth of the patient, in order to guide and direct the incisions and make the cheek tense, during which time he should stand either behind or in front of his patient, according to the side of the mouth upon which he is to operate, and then inserting the blade of a pair of scissors into the cheek about two lines outside the point which he intends shall be the labial commissure, he cuts inward and upward, dividing all the tissues save the mucous membrane, until he has reached a point in the upper lip, which will, when brought down, fulfill the required conditions. Again, a similar incision is made from the same starting point, but this time toward the lower lip, which, in turn, is divided nearly to the same extent as above; the cuts in each instance being varied to suit the irregularities in the position of the contracted orifice. Next, dissect away the flesh down to the submucous coat, thus leaving but the mucous membrane, which must in its turn be divided by a straight line running out its centre, to a point two lines inside the angle of external incision.

The mucous membrane is now turned over to imitate the normal lip, above and below, on each side, and its edges sutured to those of the skin, thus forming the vermilion border of a new lip.

This operation usually answers admirably, but sometimes, unfortunately, the mucous membrane also participates in the lesion, and the operation cannot be successfully performed; or, again, certain accidents may come between the surgeon and success, and cases will be found where this operation will not cure.

In such cases I am in the habit of modifying, or rather of adding to, or associating a mechanical appliance with these surgical means.

This consists of what might be called a "mouth-stretcher," an instrument made of wood or rubber, with a deep grove around its border, which is slipped between the lips after time has been given for union of the reflected mucous membrane. The lips will be caught and held by the gutter of the apparatus, in the whole of their circumferences, and thus not only is the healing influenced to a desired shape, but undue citratrical contraction is also prevented. This instrument should be worn constantly for a week or two, after which time its use should be continued at night until all contraction has ceased. This apparatus also does more than merely prevent contraction; it may even remedy defects which are the fault of the operator, by

compelling the regular healing of the wound, and such mistakes and blunders you will make, unless you carefully weigh each cut, and look at it in various aspects—you must bring all your mechanico-surgico skill into use.

[The incisions were then made as described, the tissues being removed down to the mucous membrane, which was brought over and firmly stitched to the integument. At each step of the operation, the case was viewed, both from a near and distant standpoint, thus rendering the final adjustment a more perfect success. The hemorrhage was but slight, and soon ceased. Cold water dressings were applied, and the boy directed not to exert any strain upon his mouth until union should be well accomplished.—De F. W.]—*Medical and Surgical Reporter.*

## THE CARE OF ABANDONED CHILDREN.

Prof. Jacobi, a high authority on all matters connected with the treatment of children, and one of the physicians of the Infants' Hospital on Randall's Island, and of the Nursery and Childs' Hospital in this city, has published an important report concerning the mortality of infants in institutions devoted to their aggregation and rearing, both here and abroad, with statistical tables which would rejoice the heart of Herod the Tetrarch, or relieve the Rev. Mr. Malthus's mind of all immediate apprehensions concerning the increase of population beyond the means of subsistence, were either of these worthies alive to profit by the information.

Without following all the numerical details embraced in this report, it may suffice to state, in general terms, that the death-rate among children under two years old, seems to be more than twice as great within the most carefully tended establishments where numbers of them are gathered together, as without the walls of these charities. Collating the mortuary records of eleven European countries, (and these dated some years ago, when the sanitary conditions were probably worse than now), the average percentage of deaths during the first year, even including still births, is 20.85, counting the total mortality in palace and hovel alike; while in foundling asylums and hospitals, these figures are commonly doubled, and in some instances more than tripled. Of "abandoned children" coming under official care, the deaths range from 50 to 100 per cent.

The estimates thus far relate to foreign countries; but on

turning our glance homewards, the prospect affords no greater encouragement. In the Nursery and Child's Hospital, which is under the painstaking management of a number of most estimable ladies, and the Infant's Hospital, controlled by the Commissioners of Charities and Correction, the mortality, despite all care and watchfulness, is frightful. In the former, to which the children were admitted at the average age of 4½ months, the rate has been 40 deaths to 60 admissions, or even counting infants discharged after sixteen days' stay in the institution, 50 per cent. of all inmates under two years of age; and Prof. Jacobi adds:

"It appears that the mortality of the nursery, if all of the admitted infants were newborn instead of being 4–5 months, would be so appalling that I am glad I am not required to state its exact figures. The worst figures of the European foundling hells of former centuries are not more fearful than ours, and although being an officer of that institution myself, and believing that I and all the rest of us have conscientiously tried to do our duties, I cannot but testify and bow down to the truth, that in spite of all the efforts of the medical staff, and the painstaking of kind-hearted and self-sacrificing ladies, the probability of the lives of children entrusted to a public institution is very slim indeed. The younger the children, and the larger the institution—the surer is death. Every story added to an edifice which is meant to be a temple of love, is an additional hecatomb of the innocents. Modern civilization, planning for the best, but mistaken about the means, has succeeded in out-Heroding Herod."

And again:

"Thus, the nursery, losing 36.5 children of 100 admitted at 4–5 months, would lose 73 of 100 admitted at birth, *viz.:* more than 2½ times as many as the average deaths of newborn children before the end of their first year in the whole city of New York."

As regards the Infants' Hospital, it is stated that the mortality rates "do not look any more promising; on the contrary, they are worse in proportion to the poorer condition in which the infants are received, and the numerous and well-known drawbacks our institution is suffering from." Notwithstanding that the average age of admission is four months and 14 days, thus excluding nearly two-thirds of the deaths usually occurring in the first year of infancy, the rate of decease in 1869 was 59.7 per cent., and even this is an improvement over former years.

Such figures as these bear sadly conclusive evidence as to the worse than uselessness of philanthrophic schemes which involve the aggregation of numerous inmates under the same roof; and yet the great question remains, what are we to do for the forlorn little waifs and strays of humanity that abound in all large cities? Means might, perhaps, be devised for improving the condition of infants cared for at home by even the poorest parents; but we should still have to provide for the multitude of illegitimate and abandoned children who are necessarily dependent on public charity for shelter. How this may be best accomplished is a matter of which the practical settlement lies in the future. One thing is clear; the crowding together of large numbers must be avoided, and separation practiced as far as possible. In France, the best results are obtained where children are distributed in country farm-houses for care; but there the system is under rigid governmental supervision, and the developments of "baby-farming" in England show the frightful dangers of such a plan when exempted from authoritative control. Under our republican institutions, it would be impracticable, even were it permissible, for the government to assume the direct management of affairs of this sort, and they must be left, as now, to private benevolence.

We believe that the solution of the problem will ultimately be found in the adoption of the "cottage system;" in the abandonment of large asylums and hospitals, and the erection, in their stead, of numerous small and inexpensive structures—little sanitary villages, so to speak—in the pure air beyond the city limits. The Cottage-Hospital at Ventnor, England, has been found to work admirably in the case of sick adults, and we are convinced that a similar plan for the rearing of infants, under such careful management as that of the Nursery and Childs' Hospital, would incalculably reduce the death-rate among the little ones taken in charge.—*N. Y. Medical Gazette.*

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Cancer of Uterus.—Professor Fordyce Barker, of New York, advocates in those cases where there is extreme sensitiveness of the ulcerated surface, pessaries of iodoform.

℞. Iodoform ---------- gr. x.
Butyri cacao ---------- ʒ j.
Glycerine ---------- gtt. v. M

One pessary. This also serves to correct fetor. A dracham of iodoform to the ounce of lard, is also a beneficial ointment. —*New York Medical Record.*

# Abridgments from Our Exchanges.

On the Influence of Section of the Cervical Pneumogastrics on the Action of Emetics and Cathartics.—Dr. H. C. Wood, Jr., in the *American Journal of Medical Sciences*, details a very extensive series of experiments on the lower animals, to demonstrate the facts in regard to this subject, which he accompanies with copious comments.

Although the English and French anatomical works do not describe the pneumogastric as descending in the abdomen below the upper end of the duodenum, Dr. J. Rollman, a German, seems to have demonstrated, that the posterior, or right par vagum, is distributed to the liver, spleen, kidneys, supra-venal capsules, and the whole of the small intestines; hence, it seemed rational to believe a connection of function existed between them.

The first series of experiments described, was instituted to determine how far section of the vagus nerve interferes with vomiting. Four dogs of different sizes and species were dosed, some time after section of the nerves, with a variety of emetics in large potions, such as viridia, veratria, and veratroidia, and both internally and hypodermically, and they all died without vomiting. Three other dogs were experimented with in the same way, only that antimony was given as the emetic, with like results. Ten other experiments were made with lethal doses of veratria and with arsenic, without causing vomiting. These are sufficient to prove that emetics will not act after division of the pneumogastrics. "That the non-occurrence of emesis is caused by the arrest of gastric secretion is, I think, demonstrated by the absence of fluid in the stomach on *post-mortem* examination."

In order to determine the relation between these nerves and purgation, eighteen animals, mostly cats, were experimented with. These experiments were varied, both in the drugs used, and the manner of using, in almost every conceivable way in which purgation could possibly be produced, after the nerves were cut. Only on two, out of the eighteen, was there any purgation induced.

These experiments with the first series seem sufficient to prove that purgation is impossible after division of the cervical pneumogastrics.

Two experiments were tried in which there was purgation, very free in one and slight in the other, after division of the nerves.

Why is it that in section of these nerves in a majority of cases purgatives do not act, but in a few cases they do? The answer is evidently wrapped up in the question: How does division of the nerve cause arrest of intestinal secretion?

After section of the par vagum secretion in the stomach is arrest-

ed; the arrest of that of the intestines is doubtless due to the same cause. Three plausible explanations present themselves:

*First.* The par vagum is possibly the direct antagonist of the contracting vaso motor nerve of the alimentary canal. If this is true, there must be contraction of the capillaries after section of the nerves preventing secretion.

*Second.* Shock.

*Third.* Accumulation of carbonic acid in the blood owing to the impeded respiration.

In order to determine whether the par vagum was a vaso-motor nerve or not, he tried other experiments, nine in number. The course pursued was to open the abdomen after section of the nerve, and apply various irritants to the intestines, both inside and outside. "A careful study of three experiments will, I think, convince any one that there is no direct connection between the pneumogastric nerve and the intestinal circulation."

In order to see how far "shock" could diminish the action of the intestinal glands, another series of experiments was made. A cat had all its legs broken, and vomited readily on administration of emetics; upon others the carotids were tied, and other means were taken to produce shock, after which emetics and cartharties were given, usually with their full operation. Dr. W. says of these last experiments, "they are not very decisive, but are, I think, sufficient to show that the intestinal effects of a division of the nerves cannot be accounted for by 'shock' alone."

To ascertain how far the arrest of secretion in the alimentary canal after division of the nerves is due to the disturbances of the respiration, to the deficient decarbonization of the blood, two series of experiments were undertaken. In the first, the action of one lung was more or less obstructed by air forced into the pleural cavity and otherwise, and then purgatives were administered. Five animals were operated upon, and in all but one, the ordinary action of the medicine was wanting; in this one there was slight purging only.

In the second series of experiments, the animals were compelled to breathe an atmosphere heavily loaded with carbonic acid gas, while they were plied with purgatives in very large doses. The trial was made with four different cats, and in not one was there any normal action of the purgatives produced.

These experiments seem to prove conclusively, that an excess of carbonic acid in the blood is capable of lessening, and when carried beyond a certain point, of wholly preventing in most cases, emesis and purgation. In doing this, the poison not only arrests muscular action, but stops likewise secretion, as is shown by the empty condition of the intestines *post mortem.*

To clear up the question as to which of these results is produced in greatest degree two cats were killed by inhaling carbonic acid, when on opening the abdomen, it was found in both cases that on irritation considerable peristaltic action was manifested.

The doctor sums up the results of his extended study as follows:

"*First.* The division of the cervical pneumogastric does, in the majority of instances, but not always, absolutely arrest free gastro-intestinal secretion, emetics and cathratics being absolutely powerless to produce it.

*Second.* That this arrest is not due to any direct influence which the nerve has upon the intestine or its circulation, but is owing to two or three causes: accumulation of carbonic acid in the blood, interference with the circulation of the lungs, backing up the blood upon the portal circulation, and perhaps shock."

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On Excision of Joints for Disease, and Especially of the Knee, Hip, and Elbow.—At a recent meeting of the Royal Medical and Chirurgical Society, Mr. F. J. Grant read a paper on this subject, in which he endeavored to set forth the conditions of disease which indicate excision of the joints in general. He has given the analysis of a series of cases, in regard to the Pathology, the operation, and its results.

The necessity for either excision or amputation in joint diseases, implies incurability by non-operative treatment. As regards excision, incurability is defined as that condition in which the joint has become *functionally useless* by destruction of the articular cartilages, without anchylosis, but while the *constitution* still retains the reserve power requisite for the long process of reparative union—averaging three months, after the removal of the diseased bone. Cases which do not have this requisite constitutional reserve power, but which are accompanied by prolonged hectic and exhaustion, will be so far unfavorable for excision, and must be submitted to the alternative of amputation.

As compared with the *natural cure*, by anchylosis, a possible result in joint disease, excision is preferably in proportion to the very long recovery by the natural process, a probation which entails long-continued suffering, and leaves the system inadequate to the contingencies of after life.

The author gave, at length, histories of the illustrative cases and their analyses. The following is a brief abstract:

1. *Excision* proved successful, by one operation in 16 out of 20 cases of the joints referred to.

2. Of the 4 unsuccessful cases, by this one operation, 3 were of *scrofulous* disease, and of the knee-joint, out of 9 cases; the remaining one being of *chronic* synovitis, and of the elbow-joint, out of 5 cases.

3. *Re-excision* was resorted to in 2 of the 4 cases; 1 knee-joint and one elbow-joint, the latter with a successful result.

4. *Secondary amputation* in three of the four cases. All three were knee-joint cases, and of scrofulous disease; one of which had been subjected to re-excision. The three amputations made *rapid recoveries*. These results tend to show that, if the attempt to pre-

serve a limb by excision, and even by re-excision of a large joint, as the knee, should fail, the operation is not unfavorable to secondary amputation to save life.

5. *No death* ensued in any of the 20 cases of knee, hip, or elbow joints, whatever had been the condition of disease, or the operation, —excision, re-excision, or secondary amputation.—*Lancet.*

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### On a Purely Milk Diet in the Treatment of Diabetes Mellitus, Bright's Disease, Disease of the Supra-Renal Capsules, Fatty Degeneration, etc.

*By Arthur Scott Duncan, M.D.*

The author continues a dissertation on this extensive subject, through three numbers of the *Lancet*, in which he most strongly advocates the treatment with skim-milk exclusively, of these several troubles, and supports his position with records of cases showing the efficacy of this course.

The milk diet, in the first place, in diabetes, is not objected to by the patient, but is relished, especially at the outset of the treatment when the thirst is intense. In this it is signally unlike, and superior to the exclusively meat diet of Dr. Rollo. The milk diet is as far superior to the meat diet as this was to any other previously used. But it is necessary to be persevered in methodically and exclusively until convalescence is established. If this rule is not followed from the beginning, the result will not be successful.

The use of milk twenty-four hours will produce marked improvement; the quantity and density of the urine fall, thirst and voracious appetite disappear, the skin becomes moist and perspiration is re-established, the troublesome nervous symptoms are abated, and refreshing sleep succeeds to the previous sleepless, restless condition rendered intolerable by the incessant thirst. In the two cases recorded, this rapid improvement was noted. In another case, on the same treatment, at the end of three days and with no other remedy, the urine fell from 23 pints sp. gr. 1038, to 6 pints sp. gr. 1038. In other words, in three days there was a dimunition of 17 pints of urine, and about 24 oz. of sugar. The other prominent symptoms of the disease underwent a like rapid change for the better. The fact that milk exercises a greater influence over diabetes than a purely animal diet, may be explained by the fact that casein, being a primitive albumen, is infinitely superior, as an agent of nutrition, to the albumen of muscle which has been highly organized for an important vital function. Beside the sugar of milk is altogether innocuous in this disease, as has been shown by experiments. It supplies the system with a saccharine, proximate, alimentary principle, equivalent to such as vegetable food affords. The sugar of milk is destined to supply for the nutrition of the young, an equivalent for the amylaceous and saccharine principles of the food of adults. Sugar in moderate quantities is not injurious in diabetes; it cannot

be again converted into sugar by any morbid process in the liver or elsewhere, and hence cannot furnish a pabulum for the elaboration of diabetic sugar.

Starch seems to be fuel for the keeping up of morbid action in all save advanced cases, hence its use in any shape should be wholly interdicted, even after recovery and sugar has for a long time been absent from the urine. The necessity of this precaution was shown by the case of one of the patients treated, who before leaving the infirmary, clandestinely partook of large quantities of bread, with the effect of causing the prompt reappearance of sugar in the urine; this, however, subsided in a few days on strictly prohibiting starchy foods.

The success of the milk treatment shows that in this disease it is not necessary to restrict the amount of fluid taken by the patient; the thirst bears a definite relation to the quantity of sugar voided, and subsides as the latter is reduced. All the patients Dr. D. has treated, were kept wholly on the use of skim-milk, until convalescence had been for sometime established, when lean meat and green vegetables were added for dinner.

Two cases are recorded of Bright's disease in which the milk diet was resorted to. In one, the patient had become enormously œdematous and ascitic; the urine was scanty, highly albuminous, and had a specific gravity of 1010. There were found abundant fatty and hyaline tube-casts. The patient was suffering from cephalalgia, nausea, and his countenance was pale, pasty, and puffy.

Five pints of carefully skimmed milk was ordered to be taken in divided doses each day; all other articles of diet were prohibited. A diuretic was likewise ordered, composed of twenty grains acetate of potash and twenty minims tincture of digitalis, to be taken three times a day. This course was pursued for a fortnight, when all traces of albumen in the urine had disappeared, and there was not a trace of dropsy left, neither did any again return; the daily quantity of urine which had been before commencing the treatment five pints, was now reduced to three pints, but its density had increased to 1015.

At this period the diuretic was left off, the milk continued, and a moderate quantity of brown bread allowed at each meal. A tonic of sulphate of quinine and sulphate of iron was ordered. In a month he was dismissed cured. In six months there had been no reappearance of the disease.

In the other case, the patient's condition was very much like the first, only perhaps worse. Exactly the same treatment was prescribed as with the former patient. The improvement was as prompt and positive. But on eating clandestinely starchy foods far beyond the amount allowed, he had a relapse, which brought back his disease with increased severity; his life was almost despaired of, coma began to appear, and death seemed imminent. By the continued use, however, of dractic purgatives, his condition was improved,

when the exclusive milk diet was again resorted to, and the patient went on to complete recovery to all appearance.

In about nine months, under bad hygiene at his own home, the disease was gradually reappearing.

A case is recorded of lead-poisoning and Bright's disease, with anasarca and epileptic coma, which had been in progress from, at the beginning, slight pains in the legs and head for six years. The patient had all the symptoms of severe lead-poisoning with albuminous urine. Under an ordinary treatment for the lead-poisoning the case improved in all its nervous manifestations, but the œdema constantly increased, and the deposit from the urine became more abundant. Epileptiform seizures were very frequent and severe. The patient was now placed on an exclusive skim-milk diet, and had twenty grains of acetate of potash three times a day as the only medicine. The case went on to a rapid and complete recovery. These cases were undoubtedly what Virchow calls *parenchymatous nephritis*—the disease being seated chiefly in the glandular epithelium of the uriniferous tubes. The *modus operandi* of the disease seems to be this: The convoluted cortical uriniferous tubules become swollen and distended by their morbid epithelial contents—glued together into solid casts by a fibrinous effusion. The fibrinous capsule of the kidney yielding but slightly to the pressure from within, the secondary capillaries—the efferent vessels of the Malpighian tufts, just external to them, become compressed, and the circulation through them more or less impeded. The blood is consequently dammed up in the primary vessels of the tuft, which are really within the tube and subject to no compression, and there results a constant escape of a large amount of albumen through their walls from the blood. The effect of the drain of albumen from the kidneys, is to impoverish the blood in this direction so much, that from the proportional excess of watery elements the red corpuscles are destroyed, and general dropsy occurs. Now, the first effect of skim-milk, taken to the extent of five or seven pints daily, is to cause a powerful diuretic effect; the effect of the profusion of water is to *flush* the uriniferous tubules, and wash out the material that blocks them up. This relieves the pressure on the secondary capillaries, more and more blood flows through them, and the congestion of the capillaries within the Malpighian tufts is removed, and less and less albumen transudes through their walls. While this beneficial change is going on, healthy epithelium is developed in the tubules which secrete the urinary excrement from the blood.

Milk is superior to other diuretics, because while it removes a large amount of water from the blood, it renews the supply of albumen in this fluid by the amount of this element which is contained in its substance, restoring a healthy condition of the blood, and preventing a *return* of the dropsy.

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THE HISTORY OF MINUTE BLOODVESSELS.—Dr. J. J. Wood-

ward, of the U. S. Army, has written a report to the Surgeon-General, on certain points in connection with this subject, which is published in the *Medical Record*. This paper is mainly a description of certain observations and experiments on the minute vessels, having a bearing on the theory of Prof. Cohnheim, and others, of the passage of white corpuscles through stomata in the walls of the vessels, in inflammation.

He describes eleven specimens, which he has prepared by staining with a dilute solution of nitrate of silver, all of which he illustrates by photo-micrographs, and in which he shows the form of cells, nuclei, and what seem to be the stomata.

If a solution of 1 part nitrate silver to 400 parts of water, be brushed over a clean epithelial surface, from a recently-killed animal, and the tissue then washed with distilled water, and exposed to the light, it will be found, on examination by the microscope, that a brownish-black pigment has been deposited on the boundaries of the epithelial cells, while the cells themselves are stained very little or not at all.

If the same solution is injected into a vessel, and it be afterward exposed to the light, the lining epithelium is plainly mapped out.

After the staining with the silver has been accomplished, a solution of carmine in borax will, by soaking the tissue in it, cause all the nuclei to become tinted red.

The cells lining the smallest vessels are shown by the specimens to be of an elongated outline, one four-hundreth to one five-hundreth in. long, and only about one-fifth as wide, with irregular zig-zag borders. These borders interlock with one another, like the bones of the cranium forming the suturus, except where certain little openings are observed, which are presumed to be the stomata or openings through which white blood corpuscles may pass. These openings are to be observed most abundantly in veins of moderate size. They were found most numerous in veins one-fiftieth of an inch in diameter, or even larger, and they become smaller and rarer in smaller branches. They are comparatively infrequent in the capillaries, and still more so in the small arteries. In number and size, they vary in vessels of the same dimensions, in different parts of the body.

In figure they are rounded, oval, or oblong. "I have measured them as large as one-four thousandth of an inch in diameter, but smaller ones, one five-thousandth to one six-thousandth of an inch are more common, and the smallest and most frequent do not exceed one ten-thousandth of an inch." They are usually found in the marginal line, between adjacent epithelial cells. "From my study of these peculiar inter-cellular forms, I am inclined to regard with favor the opinion that they are actual openings in the epithelial layer."

It has been urged that, admitting that the stomata are veritable openings, the white corpuscles—one three-thousandth of an inch in

diameter—cannot pass through them for want of room. But the extraordinary modification these little bodies undergo during their so-called "amœboid movements" would readily credit their capability of passing through such apertures. As the amœboid movement does not occur in the white corpuscles while rolling along in the torrent of the circulation, but only when the movement of the blood is arrested, more or less, completely, the fact that corpuscles do not habitually pass through the walls will not militate against the notion of palutous orifices. That corpuscles do pass out of the vessels is shown by a preparation from the stomach of a mare, dead of gastro-enteritis. In sections mounted with Canada balsam, many of the small veins were surrounded with white corpuscles, fixed in all steps of their amœboid movement. In a number of places, the white corpuscles can be observed in the interior of the vein, in the vascular wall, and in the adjacent connective tissue.

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THE TREATMENT OF CROUP.---Prof. Fordyce Barker, at the request of Dr. Jacobi, has written out his views on this subject, which have been published in the *American Journal of Obstetrics and Diseases of Women and Children.* He thinks the terms false and true croup should be abandoned, as they convey a wrong impression; that the two diseases are identical, save in degree; that true croup is only a severer form of the same affection as "laryngismus stridulus," or "catarrhal laryngitis." But the croup of diphtheria he regards as an entirely distinct and specific disease.

In speaking of treatment, he urges an early resort to positive and active measures. He always commences the treatment with an emetic of the sub-sulphate of mercury (hydrargyri sulphas flava), three to five grains. If the first dose does not operate, he gives a second, but a third is hardly ever needed. This drug, for an emetic in croup; is superior to any other, on account of its promptness of action, because it is tasteless, and easily administered, and does not exhaust the system. The effect of an emetic is to deplete the mucous membrane by an abundant secretion of mucus, which is thrown off; to cause evacuation from the larynx, by the forced expiration, of any enudation, and to produce a revulsive effect.

Dr. B. urges the giving of this medicine very early in the disease; at once, upon the appearance of symptoms indicating any approach of croup. He advises that in families where there are young children with any tendency to laryngeal inflammation, there should be kept on hand powders of this emetic, to be used, in cases of emergency, by the parents or nurse, before the doctor's arrival. They can do no harm, if given occasionally when not really needed. If the case proves to be laryngitis stridulus, the source of the reflex-irritation should be sought and removed. If it is a case of simple catarrhal laryngitis, then opiates are the main reliance. But, to a case of true croup, when the child has a hot skin, quick pulse, and hurried breathing, Dr. B. prescribes veratrum viride, in doses

of one to two drops of the tincture every two hours, visiting the child as often as every eighth hour, and regulating the dose, so that in a few hours the pulse is brought down to 80 per minute. He has used the veratrum for 25 years, and never found it fail to reduce the pulse of irritation or inflammation, and never saw any danger from its use when thus closely watched. If the indications are that the disease is extending downward, by thoracie rales, hurried and labored respiration, he adds to each dose of the veratrum two grains of carbonate of ammonia. Once in a while, when the laryngeal and trachial obstruction becomes great, he has repeated the emetic with the turpeth mineral on the second or third day. In the advanced stage of croup, when the respiration is hurried and irregular, the paroxysms of cough less marked, and the cough huskey, he finds great service from quinine, two or more grains every two hours. The tolerance and value of quinine in such cases is very great.

During the 20 years he has practiced in New York city, he has not lost a case of croup. This fortunate success is to be attributed to the promptness in treatment which he insists upon among the families he attends, in fact, that the remedy is always kept ready for immediate use; to the incessant care with which he watches the disease during its progress, and, in on small degree, to the special agents which he uses as remedies.

## Clinical Reports.

### CLINICAL REPORTS—MEDICAL WARDS OF MERCY HOSPITAL.

Clinic of PROF. DAVIS. Reported by S——.

*Oct. 13, 1870.*—Case 1st, DIABETES MELLITUS.

Male; aged 40 years; native of Ireland; laborer; has been affected with symptoms of diabetes about one year. Shortly previous to the appearance of these symptoms, he had two attacks of throwing up blood to the extent of one pint or more at a time. Whether the blood came from the lungs or stomach is not very easily determined by the account given by the patient. He also suffered, at the same time, from loss of appetite and indigestion. The evacuations from the bowels have generally been regular—once or twice a-day.

During the last two or three months, his appetite has been good, thirst excessive, and yet he has steadily declined in flesh and strength, is morbidly sensitive to atmospheric changes, and voids from one to two gallons of urine per day. (Here the attention of the class was directed to two large glass-jars, filled with light straw-colored urine, which was the quantity he had passed during the last twelve hours.) At present, the patient's skin is harsh, rough, and dry, especially on the hands and neck; his pulse is soft, weak, and a little increased in frequency; moderately emaciated; muscular weakness; and mentally despondent. The taste of the urine present is sweet, and its odor characteristic. It readily enters into fermentation by the yeast test. (Their attention was directed to a specimen showing the process of fermentation in progress, and Dr. Lyman Ware, one of the physicians to the Dispensary, kindly exhibited a specimen of the fermenting urine under the microscope, affording each student a good view of the torulæ, or fungi, developed by fermentation.)

Trommer's, and other tests, might be applied, but the foregoing, in connection with the general symptoms, are sufficient to render the diagnosis certain in this case.

In commenting on the case, the Professor said, substantially, that the early symptoms of diabetes are generally obscure, and that the disease is often associated with tuberculosis. The digestive function is generally impaired; for, though the appetite may be good, or even voracious, yet digestion is slow, and accompanied by fulness, eructations, and mental depression. The bowels are inactive, the skin dry, and a gradually increasing thirst. As the disease progresses, the dry and harsh condition of the skin, and the loss of flesh and strength become more manifest, and the patient often complains of weariness and some pains in the back, and, sometimes, sharp neuralgic pains in different parts of his system. The existence of these symptoms, and especially the steady loss of flesh and strength, while the patient is eating and drinking, as well as urinating more than natural, should always cause us to suspect the existence of diabetes. And if, with these symptoms, the applica-

tion of the proper tests shows the presence of sugar, the diagnosis is rendered certain. A mere excessive secretion of urine, however, is not sufficient to indicate saccharine diabetes. In certain paroxysms of nervous excitement, the kidneys will secrete double or tripple the natural quantity of urine in a given time; but, in such cases, the urine is limpid, like spring water, and of low specific gravity, while in diabetes mellitus the specific gravity is high. In the case before us, the specific gravity of the urine, when the man first came under treatment, was 1040.

In albuminuria the urine is generally of high specific gravity; but here the *quantity* is generally small, and the skin and countenance of the patient is pale and bloated, instead of corrugated and shrunken.

The tendency of diabetes, when left to itself, is to steadily increase until the patient becomes fatally exhausted; but its progress is generally slow. In many cases, the symptoms are improved during the warm months of summer, and become aggravated by the cold and damp of autumn and winter. An atmosphere that relaxes the skin and increases the activity of its function, seems to lessen the activity of the kidneys, and thereby ameliorates the condition of the patient.

The pathology of the disease is still involved in obscurity. It was long since ascertained that the excessive quantity and saccharine quality of the urine did not depend on any specific or characteristic lesion of the kidneys. These organs appear to be only the outlet for an excessive quantity of glucose or saccharine matter, that finds its way into the blood from some other source; but from what other source is not yet fully determined. The experiments of Bernard and of Drs. A. Flint, Sr. and Jr., seemed to establish the fact that the liver was an active sugar-producing organ, and hence it became probable that derangement of the functions of this organ constituted the true source of the diabetes. But still later experiments have, at least, rendered it doubtful whether the sugar detected in the liver is not from *post mortem* changes.

It has long been known that somewhere in the processes of

digestion and assimilation, the starch and gum taken as food become converted into sugar; and, in health, the sugar is further converted into lactic acids and other products. But, in diabetes, this further change fails to take place, and the sugar remains in excess in the blood, stimulating the kidneys to excessive action, and, consequently, maintaining a constant drain upon the whole system.

TREATMENT.—The indications for the treatment of diabetes are, first, to exclude, as far as possible, all elements of food capable of being converted into sugar in the process of digestion. Second, to so alter the processes of digestion and assimilation as to complete the conversion of the saccharine products of digestion into lactic acid, or such other constituents as are capable of being appropriated to the tissues, or excreted without disturbing the function of the kidneys. To accomplish these purposes, there is probably no more efficient method than to keep the patient steadily on the use of skimmed milk, buttermilk, or milk-whey, bran-bread, and lean meat. For, fresh vegetables, onions, and cabbages may be allowed, as they contain but little starch or sugar. As an occasional change, a porridge, made of roasted or scorched cornmeal, may be allowed. In addition to the regulation of diet, I have found much advantage in the use of a teaspoonful of the liquid Bennett immediately after each meal. In some instances, a pill, containing pulv. opii half a grain, and sulph. cupri one-sixth of a grain, taken before breakfast and dinner, will, also, lessen the quantity of urine.

The wearing of flannel next the skin, and a warm bath two or three times a week, are, also, valuable aids. Diabetes is a very obstinate, and often incurable, disease; yet, I have seen a few cases cured by a persevering use of the foregoing means.

# Book Notices.

A Treatise on the Theory and Practice of Obstetrics. By W. H. Byford, A.M., M.D., Prof. of Obstetrics and Diseases of Women and Children in the Chicago Medical College, etc., etc., author of the Practice of Medicine and Surgery applied to the Diseases and Accidents incident to Women; Chronic Inflammation of the Unimpregnated Uterus, etc., etc. New York: Wm. Wood & Co., 61 Walker Street. 1870.

This is an octavo volume of about 460 pages, published in good style, and amply illustrated by cuts. It is a concise, plain, practical treatise on midwifery, convenient, both as a text-book for students, and a work of reference for the practitioner. The subjects treated are arranged under the following heads: The Pelvis—the Fœtal Head—Female Organs of Generation—Generation—Displacements of the Uterus during Pregnancy—Abortion and Miscarriage—Labor and its Varities—Anæsthetics in Labor—Natural Labor in Multiple Cases—Attentions to the Child—Puerperal Condition—Difficult Labors—Hemorrhage after Expulsion of the Fœtus—Inversion of the Uterus Complicating Labor—Rupture of the Uterus—Prolapse of the Cord—Puerperal Convulsions. We freely commend the work to the patronage of the profession.

For sale by W. B. Keen & Cooke, and booksellers generally.

Heath's Practical Anatomy—first American from the second English edition, edited with additions by William W. Keen, M.D., Lecturer on Pathological Anatomy in the Jefferson Medical College; Lecturer on Anatomy and Operative Surgery in the Philadelphia School of Anatomy.

This book in reality supplies a want long felt for a real *dissector's manual.* We have many dissector's manuals, but none of them have been all that the student could ask, until this volume made its appearance. All of our dissector's manuals have either been so small, as to be of little benefit to the beginner, or so large and voluminous as to take his whole time to find

what he wanted. But Heath's Practical Anatomy, is a real help to anyone at the dissecting table, whether he be an experienced anatomist or a beginner. It is full and concise, descriptions clear, and illustrated with fine woodcuts, all calculated to be of the greatest possible assistance to the student. Dr. Keen, the editor, knowing from several years of successful teaching, what the exact wants of the American student are, has considerably modified the text of the original English edition, so as to bring it in accord with the method pursued in American dissecting-rooms. He has also corrected all errors, typographical and otherwise, and has made a number of important additions. Among which are the latest researches on the action of muscles. The Supinator Rudii Longus, for instance, has long been described as a supinator and flexors of the forearm, but it has been shown, within a few years, to be a powerful flexors of the forearm, its high origin on the humerous giving it its power.

There are also practical observations on the action of the Interossei, Omohyoid, and the most recent investigations on the ligamentous action of muscles, and of the nervous supply to the arytenoid muscle. Dr. Keen has also added some practical remarks on hernia, triangles of the neck, and has given some general rules for the relation of parts and the structure of organs. The directions for the dissection of the eye, are the best to be found in any work on anatomy. The additions also include directions for the preservation of subjects for dissection, and for making anatomical preparations, useful knowledge, not only for the student in the dissecting-room, but also to the practitioner.

After a careful examination of this book, we can say, that it is, all considered, the best book for the use of students, and those engaged in dissecting, with which we are acquainted.

H. W. B.

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Transactions of the Twenty-fifth Annual Meeting of the Ohio State Medical Society, held at Cleveland, June 14–16, 1870.

This is a neatly published and bound volume of 300 pages; containing the following: Minutes of the Twenty-fifth Annual

Meeting; Address of the retiring President; Surgical Applications of Carbolic Acid, by P. S. Connor, M.D., Cincinnati, O.; Climatology and Diseases of Southeast Kansas, by P. Beeman, M.D., Iola, Kansas; Report of Committee on Anatomy Law; Historical Review of Medical Organizations in Ohio, by Edward B. Stevens, M.D., of Cincinnati, O.; Report on Hæmatics, by E. H. Wyatt, M.D., Delaware, O.; Report on Vaccination, by W. B. Davis, M.D., Cincinnati, O.; Report on Pneumonia, by O. G. Selden, M.D., Shanesville, O.; Prevailing Diseases, by J. B. Black, M.D., Newark, O.; Temperature of Nervous Diseases, by W. G. Conklin, M.D., Dayton, O.; Cantharisom, by Alex. McBride, M.D., Berea, O.; Report on Obstetrics, by Edward B. Stevens, M.D., Cincinnati, O.; A Poem, by John M. Brown, M.D.; Constitution of the Ohio State Medical Society, and Code of Ethics of the American Medical Association; List of Members.

Many of the foregoing papers are worthy of a careful reading, and the volume is highly creditable to the Society.

## Editorial.

EXPLANATION.—The reports of Dr. Jones on Otology, and Dr. Bogue on the Use of Plaster of Paris in Fractures, in the October number of the *Examiner*, should have been credited as read to the Annual Meeting of the Illinois State Medical Society, in May, 1870.

EXCHANGES.—We learn by our exchanges, that a new medical journal has been commenced in Philadelphia, called the *Medical Times;* and that another has been for some time past published at St. Paul, Minnesota. Having never been honored with a copy of either, we cannot give any description of them.

AMERICAN MEDICAL ASSOCIATION.—We see by our California and Oregon exchanges that the profession in those States is rapidly organizing new medical societies, or reviving old ones, and preparing to give their brethren from this side the mountains a cordial reception at the meeting of the Association next May. And, notwithstanding all the severe criticisms and carping which has been indulged in regarding the last meeting of the Association, we have no doubt but the coming meeting will be one of the most pleasant and profitable that has been held since the Association was organized.

## INFLUENCE OF MUSCULAR EXERCISE ON THE URINE.

Dr. Austin Flint, Jr., read a paper entitled, "The Influence of Excessive and Prolonged Muscular Exercise upon the Elimination of Effete Matters by the Kidneys; based on an Analysis of the Urine passed by Mr. Weston while walking One Hundred Miles in Twenty-one Hours and Thirty-nine Minutes."

When Mr. Edward P. Weston was performing his great pedestrian feat, at the Skating Rink in this city, last May, Dr. Flint visited the rink near the close of the hundred-mile walk. He learned that, by chance, all the urine passed during the walk had been collected in a single vessel. This was placed at his disposal and subjected to a careful quantitative analysis. The observation being entirely unpremeditated, certain elements of scientific completeness were lacking, such as the exact amount of food and drink consumed, etc.; and the specimen of normal urine for comparison was necessarily obtained, not before the walk, but some three months later, when the conditions seemed perfectly satisfactory.

It was evident that an accurate comparison of the urine passed during such an enormous strain upon the muscular and nervous systems, under known conditions of diet, etc., with the normal urine under known conditions, would be of great importance to science; especially since the observations of Fick and Wislicenus, Haughton, and others, had tended to throw doubt upon the commonly received view that exercise increases the elimination of urea.

Mr. Weston is 31 years old; of medium height, rather slight; ordinary weight, without clothing, 122 pounds. From his professional occupation, his hours of sleep and eating are quite regular. He has never taken a course of "training," prepar-

atory to his feats of endurance. His general health is perfect. At the time of the walk he was in "fine" condition, and his weight was five pounds less than ordinary.

The conditions during the walk were, as nearly as could be ascertained, the following:

Weight of body, without clothing, 117 pounds.

Food and drink taken: Beef essence, between one and two bottles; oatmeal gruel, two bottles; sixteen to eighteen eggs, raw, in water; lemonade, half a pint; champagne, about three fluidounces; brandy, two and one-half fluidounces; water to rinse the mouth every few minutes, but little swallowed.

No sleep; no alvine evacuation; perspiration slight.

The urine passed during this time (counted as twenty-two hours) measured 73½ fluidounces (estimated for twenty-four hours at 80 fluidounces); acidity normal; color light canary; odor strongly urinous, but normal; specific gravity, 1011.55; no abnormal matters; microscopical examination negative. Analyzed by the methods detailed in the speaker's manual of the "Chemical Examination of the Urine," its composition per fluidounce was found to be:

*Urine of Exercise per Fluidounce.*

| | |
|---|---|
| Urea | 5.779 grs. |
| Chlorine | 1.120 " |
| Sulphuric acid | 0.920 " |
| Phosphoric acid (total) | 1.504 " |
| Phosphoric acid (with alkalies) | 1.280 " |
| Phosphoric acid (with earth) | 0.224 " |
| Uric acid | 0.500 " |

The conditions during the twenty-four hours, 6 P.M. to 6 P. M., selected for collecting the standard specimen of urine for comparison, were as follows:

Weight, naked, 122 pounds.

Food and drink: Supper—Pickled lamb's tongues, warm light biscuit, one cup tea. Dinner—Cold corned-beef, hot bread-cakes, one slice bread, one cup coffee. One glass of effervescing root beer, and two cigars during day. Had eaten salt ham three hours before the beginning of the selected twenty-four hours.

Sleep between eleven and twelve hours; one alvine discharge (no urine lost).

The urine passed in the twenty-four hours measured 33 fluidounces; acidity rather faint; color light canary, slightly turbid; odor strongly urinous, but normal; specific gravity 1025.43;

no abnormal matters; decomposition rather rapid; microscopical examination showed slight excess of mucus, otherwise negative. Analyzed by methods identical with the last, the composition per fluidounce was found to be:

*Urine of Rest per Fluidounce.*

| | |
|---|---|
| Urea | 5.800 grs. |
| Chlorine | 3.360 " |
| Sulphuric acid | 1.440 " |
| Phosphoric acid (total) | 0.960 " |
| Phosphoric acid (with alkalies) | 0.640 " |
| Phosphoric acid (with earths) | 0.320 " |
| Uric acid | 0.680 " |

The Urine of Exercise, calculated for twenty-four hours, is compared with the Urine of Rest for twenty-four hours in the following table:

*Urine of Rest and of Exercise for Twenty-four Hours.*

| | Rest. | Exercise. |
|---|---|---|
| Total quantity | 33.000 fl. oz. | 80.000 fl. oz. |
| Urea | 191.400 grs. | 463.368 grs. |
| Chlorine | 110.880 " | 89.808 " |
| Sulphuric acid | 47.520 " | 73.776 " |
| Phosphoric acid (total) | 31.680 " | 120.600 " |
| Phosphoric acid (with alkalies) | 21.120 " | 102.600 " |
| Phosphoric acid (with earths) | 10.560 " | 18.000 " |
| Uric acid | 22.440 " | 40.080 " |

After making all allowances for differences of diet and other conditions, the speaker concluded that the severe and prolonged muscular exertion must be credited with producing a decided increase in the amount of water eliminated by the kidneys; an increase of from seventy-five to one hundred per cent. in the amount of urea eliminated; a considerable part of the increase in the sulphates and phosphates; and an increase of about seventy-eight per cent. in the uric acid. The dimunition of the chlorides seemed pretty well accounted for by the diet.

For further calculations from the above data, and a more detailed statement of the points involved, we refer the reader to Dr. Flint's paper, which is to be published.*

The Society adjourned.—*N. Y. Medical Record.*

* It appears in the *New York Medical Journal* for October.—Ed.

## POISONING BY CARBOLIC ACID, IN A CASE OF ACUTE ECZEMA.

Reported by T. G. RODDICK, M.D., Assistant House Surgeon, Montreal General Hospital.

Thomas Hobbs, æt. 80, was admitted into the Montreal General Hospital, under care of Dr. Fraser, on the 18th April, 1870, suffering from Acute Eczema, intense in degree, and affecting the whole cutaneous surface. The patient had been troubled with the disease for about five weeks previous to admission, and had been treated for scabies with the ordinary sulphur ointment. The arms, legs, and trunk were literally covered with the disease, and it had invaded his scalp for a short distance behind. He was very feeble, and indeed had to be assisted in and out of bed.

For the first three or four days after admission, he was ordered ungi. zinzi., to be applied over the diseased surface, twice a-day, and in the interim a tepid bath. This plan of treatment had no marked effect on the disease, so on the fifth day the dresser was instructed to apply on lint an ointment containing one part of carbolic acid to four parts of lard, over the arms and thighs, and to cover the whole with oil silk. This application was faithfully made about four o'clock in the afternoon, and at half-past five the nurse reported that the old man was dying. When seen, as he was almost instantly, he was found to be in profound coma, with the pupils firmly contracted; breathing stertorous; pulse weak, quick, and flickering; whole surface of the body livid; extremities cold; large quantity of mucus in bronchial tubes; inability to swallow; profound insensibility. The patients in the same ward had seen him, half an hour before, crawl out of bed, and, after sitting on the chair a few moments, fall to the floor apparently in a faint. He was lifted to his bed and taken no further notice of till the nurse gave the alarm.

It was thought that the extensive application of carbolic acid would account for his condition. So, accordingly, the dressings were instantly thrown off and the part washed thoroughly with soap and water. At the same time sinapisms were applied to his chest and the calves of his legs, and a blister to the nape of his neck; brandy was given as freely as possible, and a turpentine and castor oil enema. For the first hour his condition improved rapidly, but as soon as the stimulating effect of the brandy and sinapisms had passed off, he seemed to lapse into

his former condition. The symptoms varied in intensity from time to time, until ten o'clock, when he vomited freely, and from that time rapidly regained his consciousness and fell almost immediately into a natural sleep.

The odor of carbolic acid in the vomited matter was distinctly perceptible, but, unfortunately, none of the secretions were tested.

When fully recovered, the patient said that a very few minutes after the application of the ointment he experienced a peculiar burning, prickling sensation over the whole body, and that although he had the greatest desire to micturate, he could not pass a single drop of urine. He had no recollection of getting out of bed, and that he was in a faint when the patients found him on the floor there can be little doubt.

As to the disease it improved with marvellous rapidity, and although nothing was afterwards applied but cod liver oil, he was pronounced cured on the sixteenth day after admission, and has had no recurrence of the disease since.

Dr. Fraser, in a few remarks to the students, stated that the case is instructive in two respects: 1st. As regards the danger incurred by the extensive application of carbolic acid to the skin, when the cuticle is removed, as it always is in eczema, leaving the cutaneous absorbents and capillaries exposed, through which it is readily absorbed and produces its known depressing effects upon the circulation through the nervous system. These effects have also been occasionally observed to follow its injection into large abscesses. 2d. As regards its efficiency as a therapeutic remedy in eczema, in which disease, however, judging from its effects in the present case, it should be employed with caution, or to portions only of the diseased surface at a time, and its effects closely watched.

The action of the acid on the urinary organs which has been observed by others, was also pointed out, and so was the treatment which succeeded so well in combating the dangerous effects in the present instance.—*Canada Medical Journal.*

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THE PHOTOGRAPHIC REVIEW OF MEDICINE AND SURGERY, a publication now, for the first time offered to the profession, has for its object the presentation of the most interesting cases coming under notice. The *Photographic Review* will appear in numbers, every other month, each containing four photographic plates, with appropriate notes and remarks. Subscription, $6.00 per annum. J. P. Lippincott & Co., publishers, Philadelphia.—*Boston Medical and Surgical Journal.*

## Mortality for the Month of September, 1870.

| | | | | | |
|---|---|---|---|---|---|
| Accidents, by fire, Farwell building | 5 | Debility, general | 9 | Intemperance | 5 |
| " burned, clothes taking fire | 1 | Diarrhœa | 29 | Ischuria, renal | 1 |
| " blow from bat | 1 | " chronic | 14 | Kidneys, Bright's disease | 1 |
| " drowned | 8 | " & complications | 4 | Liver, disease & dropsy | 1 |
| " crushed by fall of stone | 1 | Diphtheria | 20 | " cirrhosis | 1 |
| " by fall | 3 | Dropsy, general | 5 | " hæmorrhage | 1 |
| " fracture of skull | 2 | " of chest | 1 | " Induration | 1 |
| " thrown from wagon | 1 | Dyspepsia | 1 | Lupus, exedens | 1 |
| " run over by " | 1 | Dysentery | 32 | Lungs, congestion | 5 |
| " railroad | 5 | " acute | 1 | " " and old age | 1 |
| " shot | 1 | " chronic | 2 | " hæmorrhage | 1 |
| " scalded | 1 | " typhoid | 3 | Mania, acute | 1 |
| Abscesses scrofulous | 1 | Entero-colitis | 4 | Manslaughter | 2 |
| " pulmonic | 1 | Enteritis | 11 | Metro peritonits puerperal | 1 |
| Apoplexy | 5 | Erysipelas | 1 | Meningitis | 7 |
| Ascites | 1 | " of leg | 1 | " cerebro-spinal | 2 |
| Bowels, congestion of | 1 | Fever, congestive | 2 | " tubercular | 4 |
| " obstruction of | 1 | " puerperal, | 2 | Neck, tumor on | 1 |
| Brain, congestion | 6 | " intermittent | 1 | Old age | 5 |
| " inflammation | 8 | " scarlet | 5 | " congestion lungs | 1 |
| Births, premature | 27 | " " complications | 2 | " and dysentery | 1 |
| Births still | 49 | " " malignant | 1 | Paralysis | 1 |
| Bronchitis | 4 | " typhoid | 58 | Pericarditis | 1 |
| " capillary | 1 | " typhus | 1 | Peritonitis & Ascitis | 1 |
| " chronic | 1 | Gastritis | 3 | Phlegmasia dolens | 1 |
| Cancer of breast | 2 | Gastro-Enteritis | 4 | Pharngitis & Bronchitis | 1 |
| " stomach | 1 | Hæmatemesis | 1 | Pneumonia | 11 |
| " uterus | 2 | Hemorrhage umbilical | 1 | " bronche | 1 |
| " neck | 1 | " internal | 1 | " typhoid | 5 |
| Carbuncle of head and back | 1 | Heart, disease of | 1 | Scrofula | 1 |
| Childbirth | 1 | " mitral valve, insufficiency of | 1 | Septiceamia | 1 |
| Cholera Infantum | 99 | " organic disease | 2 | Spina bifida | 1 |
| " morbus | 1 | " fatty degenerat'n | 1 | Stomatitis | 1 |
| Chest, gun-shot wound of long standing | 1 | " valvular disease | 1 | Suicide by arsenic | 2 |
| Consumption | 35 | Hemiplegia | 1 | Syphilis, secondary | 1 |
| Convulsions | 65 | Hepatitis, | 1 | Tabes mesenterica | 33 |
| Croup | 21 | Hernia, injuinal | 1 | Teething | 9 |
| " membranous | 10 | " strangulated | 1 | " & complications | 8 |
| Cynanche tonsillaris | 2 | Hip-disease | 1 | Tumor ovarian | 1 |
| Cysterarcoma & Dropsy | 1 | Hydrocephalus | 7 | Uterus, fibroid tumors | 1 |
| Development deficient | 1 | " acute | 4 | " hæmorrhage | 1 |
| | | " chronic | 1 | Whooping-cough | 7 |
| | | Inanition | 13 | | |
| | | Imflam. from biliary calculi | 1 | Total | 691 |

### COMPARISON.

Deaths in Sept., 1870, 691 | Deaths in Sept., 1869, 814 | Decrease, 123
Deaths in Aug., 1870, 1037 | Decrease, 346

### AGES.

| | | | | | |
|---|---|---|---|---|---|
| Under 1 | 229 | 10 to 20 | 36 | 70 to 80 | 16 |
| 1 to 2 | 143 | 20 to 30 | 65 | 80 to 90 | 3 |
| 2 to 3 | 34 | 30 to 40 | 41 | Unknown, | 1 |
| 3 to 4 | 12 | 40 to 50 | 39 | | |
| 4 to 5 | 9 | 50 to 60 | 24 | Total, | 691 |
| 5 to 10 | 15 | 60 to 70 | 24 | | |

| | | | | | |
|---|---|---|---|---|---|
| Males, | 389 | Females, | 302 | Total, | 691 |
| Single, | 534 | Married | 157 | Total, | 691 |
| White, | 684 | Colored, | 7 | Total, | 691 |

NATIVITY.

| | | | | | |
|---|---|---|---|---|---|
| Atlantic Ocean | 0 | England | 14 | Nova Scotia | 0 |
| Bohemia | 8 | France | 1 | Switzerland | 1 |
| Canada | 4 | Germany | 81 | Scotland, | 0 |
| Chicago, Native | 79 | Holland | 0 | Sweden | 20 |
| Chicago, Foreign | 329 | Ireland | 60 | Unknown | 6 |
| U. S., other parts | 79 | Isle of Jersey | 0 | | |
| Denmark | 1 | Norway | 8 | Total, | 691 |

MORTALITY BY WARDS FOR THE MONTH.

| Wards. | Mortality. | Wards. | Mortality. |
|---|---|---|---|
| 1 | 5 | 18 | 53 |
| 2 | 13 | 19 | 14 |
| 3 | 21 | 20 | 12 |
| 4 | 13 | Accidents | 30 |
| 5 | 18 | County Hospital | 18 |
| 6 | 57 | Home for Friendless | 2 |
| 7 | 44 | Hospital Alexian Brothers | 1 |
| 8 | 64 | Immigrants | 13 |
| 9 | 49 | Jewish Hospital | 1 |
| 10 | 14 | Mercy Hospital | 3 |
| 11 | 20 | Marine Hospital | 2 |
| 12 | 32 | Manslaughter | 2 |
| 13 | 11 | St. Joseph Orphan Asylum | 6 |
| 14 | 12 | Suicide | 2 |
| 15 | 75 | | |
| 16 | 40 | Total, | 691 |
| 17 | 44 | | |

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Secretion of Milk Restored by Electricity.—A married lady had had two children, and in each case the flow of milk was abundant. Had typhoid fever in August, 1869. Confined Jan. 8th, 1870, for the third time. Milk appeared in the breasts on the third day, but on the fourth it diminished, and for several days it was almost wholly absent. On the evening of the 13th, the interrupted current from a Farmer's battery was applied, for about $2\frac{1}{2}$ minutes, to one side of the breast, and then, for the same length of time, to the other side, the poles being covered with moistened sponge. Little pain and but slight redness accompanied the operation. The milk had increased very decidedly on the next morning, and after five days' use of the current, with a daily application, it was quite abundant. Reference was made to Dr. Barker's paper on this subject in the *New York Medical Journal.—Boston Medical and Surgical Journal.*

RECEIPTS FROM SEPTEMBER 1, TO OCTOBER 25.—Dr. H. C. Hutchinson, City, $3.00; Dr. T. J. Whitter, Irving, Ill., 3.00; Dr. Milton Parker, City, 6.00; Dr. L. D. Tompkins, Cassopolis, Ill., 3.00; Dr. Thos. Aiton, Pittsfield, Ill., 3.00; Dr. Curtis, City, 3.00; Dr. A. L. Shay, Ossion, Iowa, 3.00; Dr. S. A. McWilliams, 3.00; Dr. T. W. Havres, Mt. Hope, Wis., 3.00; Dr. J. F. Hopkins, Oconomowoc, Wis., 6.00; Dr. J. Schenck, City, 3.00; Dr. R. O. Phillips, City, 3.75; Dr. J. R. Garrell, Newton, 9.00; Dr. W. R. Fox, San Leardo, Col., 3.00; Dr. G. W. Rohr, Rockford, Ill., 6.00; Dr. O. T. Bundy, Deposit, N. Y., 3.00; Dr. J. W. Johns, Dyer, Ind., 5.00.

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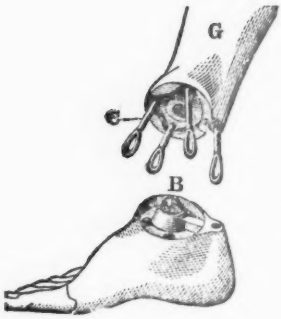


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